TECHNOLOGY DEPT.

March 5, 1941

NATIONAL PETROLEUM NEWS

PUBLIC LIBRARY
MAR 1941
DETROIT

REFINERS ARE INDIFFERENT TO RECYCLE-CONDENSATE

Since refiners are not equipped to process present volume of recycle condensate, recycle plants are installing distillation equipment and producing gasoline comparable to straight-run at lower cost than crude oil refiners.

Page R-66

OBTAIN UP TO 37% ISO-OCTANE IN CATALYTIC ISOMERIZATION

Page R-68

SOLUTIZERS IMPROVE TREATING OF FOUR TYPES OF GASOLINE

Page R-72

NEWS IN BRIEF

DEFENSE PLANS OPEN NEW OIL CONSUMING AREAS

With billions of dollars being spent for U. S. defense projects and with new oil consuming areas opening, NPN sent its news editor to Charlestown, Ind.—No. 1 Defense Boom Town—for an "on the spot" oil story. His graphic article begins on page 26.

* * *

Army, Navy defense plans create increased demand for aviation fuel. Page 11.

* * *

Refiners fight 1c processing tax in Texas. Page 11.

Canada gives Oil Controller wider regulatory powers. Page 11.

* * *

Recycling program discussed at Southwest A.P.I. meeting. Page 19.

* * *

Texas begins study of all wells in state. Page 14.

* * *

Mid-continent oil men warned not to give powers to Washington. Page 18.

* * *

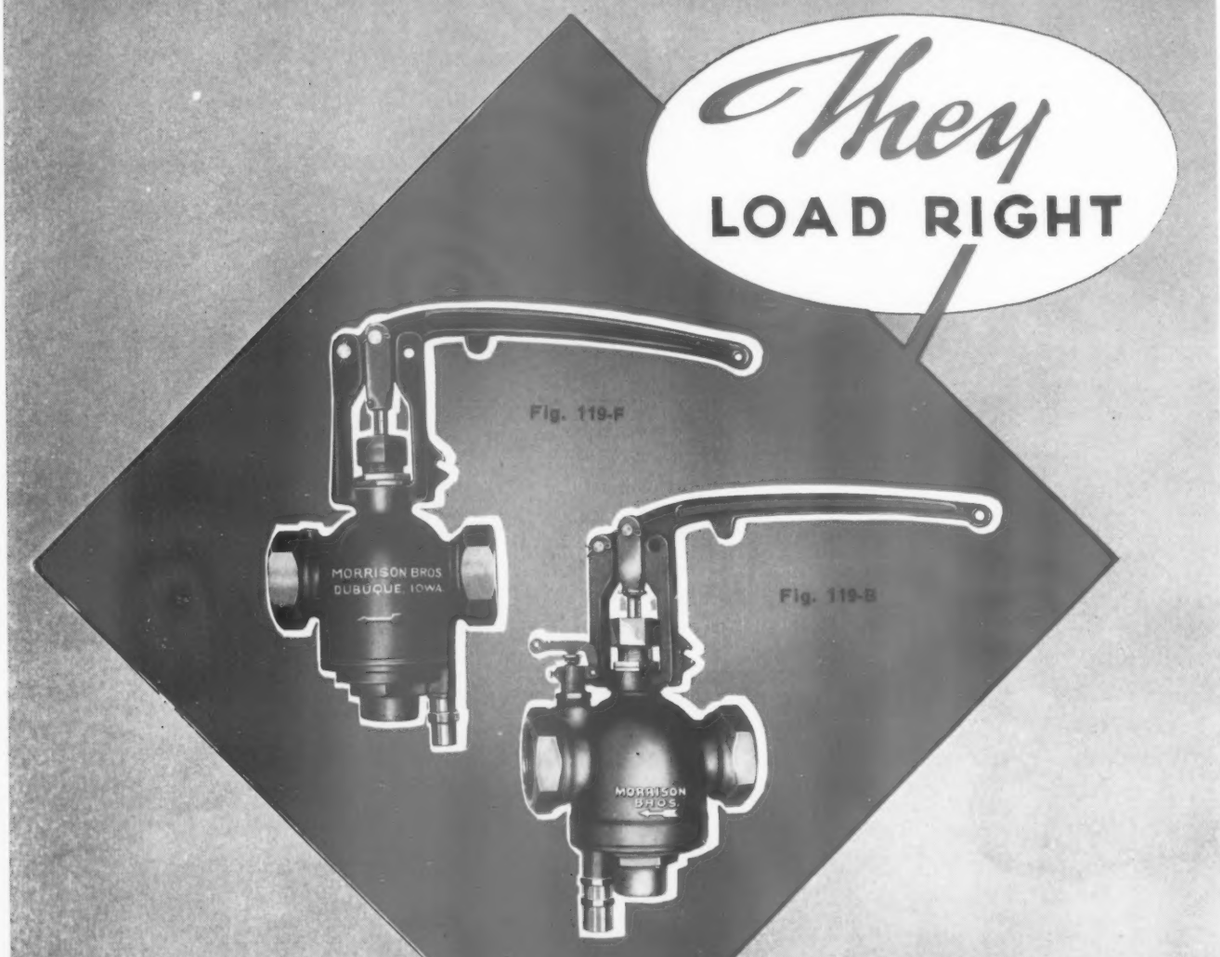
California favors membership in Interstate Compact. Page 14.

REFINING TECHNOLOGY EDITION

MORRISON

SERVICE LOADING VALVES

They LOAD RIGHT



High Pressure,—Low Pressure,—Gasoline and Heavy Oils are all the same to the Fig. 119 Series. These valves, built of highest grade red brass and naval bronze, are the ultimate product and result of many years of valve designing and manufacturing experience. They are equipped with accurately machined dash pot, piston and special alloy piston ring, assuring positive yet simple closing speed control. Write for further information and prices.

MORRISON BROS. COMPANY

OIL EQUIPMENT HEADQUARTERS

DUBUQUE, IOWA

COMING MEETINGS

MARCH

National Dixie Distributors, Inc., Fort Worth, Tex., Mon., March 10.
American Petroleum Institute, Division of Production Spring Meeting, Pacific Coast District, Biltmore Hotel, Los Angeles, Calif., Tues, March 11.
Indiana Independent Petroleum Assn., 1941 Spring Convention & Refiners' & Suppliers' Exhibit, Hotel Severin, Indianapolis, Ind., Tues-Thurs., March 11-13.
New Jersey Oil Trade Assn., Annual Spring Frolic & Induction of Officers, Robert Treat Hotel, Newark, N. J., Thurs., March 13.
Society of Automotive Engineers, National Aeronautic meeting, Washington Hotel, Washington, D C., Mar. 12-14.
Oil Burner Institute, Progress Exhibition, Commercial Museum, Philadelphia, Pa., Mon.-Sat., March 17-22.
American Petroleum Institute, Mid-Continent District Production Division, Herring Hotel, Amarillo, Tex., Fri.-Sat., March 21-22.
Oil Trades Assn. of New York, Annual Meeting, Waldorf-Astoria, New York, Tues, March 25.

APRIL

Michigan Petroleum Assn., Annual Spring Convention. Detroit-Leland Hotel, Detroit, Mich., April 2 and 3.
American Assn. of Petroleum Geologists, 26th Annual Meeting, Rice Hotel, Houston, Tex, Wed.-Fri., April 2, 3 and 4.
American Chemical Society, St. Louis, Mo., Mon.-Fri., April 7-11.
Midwest Power Conference, Palmer House, Chicago, Wed.-Thurs., Apr. 9-10.
Western Petroleum Refiners Assn., Arlington Hotel, Hot Springs, Ark., Wed.-Thurs., April 16-18.
American Petroleum Institute, Division of Production, Wm. Penn Hotel, Pittsburgh, Pa., Thurs.-Fri, April 17-18.
Fuel Oil Distributors Assn., Asbury Park, N. J., Wed.-Fri., April 23-25.
Petroleum Industry Electrical Assn., Tulsa, Okla., Wed.-Fri., April 23-25.
Natural Gasoline Assn. of America, Annual Convention, Baker Hotel, Dallas, Texas, Wed.-Fri., April 23-25.
National Petroleum Assn, semi-annual Meeting, Hotel Cleveland, Cleveland, O., Thurs.-Fri., April 24-25.
Petroleum and Natural Gas Conference, State College, Pa., Fri.-Sat., Apr. 25-26.

MAY

American Gas Assn., Natural Gas Section, Dallas, Tex., Mon.-Thurs., May 5-8.
Independent Oil Men's Assn. of New England, Annual Convention, Copley Plaza Hotel, Boston, Mass., Thurs., May 8.
Society of Automotive Engineers, Production Meeting, Schroeder Hotel, Milwaukee, Wis., May 12 and 13.
Virginian Petroleum Jobbers Assn., Spring Meeting. John Marshall Hotel, Richmond, Va., May 15.
Virginia Oil Men's Assn., annual spring meeting, John Marshall Hotel, Richmond, Va., Fri., May 16.
American Institute of Chemical Engineers, 33rd Semi-Annual Meeting, Edgewater Beach Hotel, Chicago, Ill., Mon.-Wed., May 19-21.
American Petroleum Institute, 11th Mid-Year Meeting, Mayo Hotel, Tulsa., Okla., Mon.-Fri., May 19-22.
National Assn. of Purchasing Agents, (Oil Company Buyers' Group) Stevens Hotel, Chicago, Mon.-Thurs., May 26-29.
National Oil Scouts & Land Men's Assn., Dallas, Tex., Thurs.-Sat., May 29-31.

JUNE

Illinois-Indiana Petroleum Assn., 9th Annual Petroleum Conference, Robinson, Ill., Sat., June 7.
Pennsylvania Grade Crude Oil Assn., Annual Meeting, Bradford, Pa., June 19-20.
American Society for Testing Materials, 44th Annual Meeting, Palmer House, Chicago, Ill., Mon.-Fri., June 23-27.

SEPTEMBER

American Chemical Society, Atlantic City, N. J., Mon.-Fri., Sept 8-12.
National Petroleum Assn., Hotel Traymore, Atlantic City, N. J., Wed.-Fri., Sept. 17-19.
National Lubricating Grease Institute, 9th Annual Meeting, Stevens Hotel, Chicago, Ill., Mon.-Tues., Sept. 29-30.

OCTOBER

Texas Mid-Continent Oil & Gas Assn., Beaumont, Tex, Tues.-Thurs., Oct. 9-11.

NOVEMBER

American Petroleum Institute, 22nd Annual Meeting, San Francisco, Calif., Mon.-Fri., Nov. 3-7.

NATIONAL PETROLEUM NEWS

MARCH 5, 1941

NEWS

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Subscription rate $3 per year in United States and Mexico; $4.50 in Canada and Foreign Countries. Current copies 15 cents, except special issues; back copies more than two months old 25 cents per copy.

THIS WEEK WITH NPN

POSTERS

That merchandising-minded oil marketers have realized the educational and sales-building opportunities offered by NPN's Petroleum Engineering Bulletins is shown by many orders we have received for these posters. Now, NPN learns that a large eastern oil marketing company has even distributed these posters to service stations in Capetown, South Africa; Rio de Janeiro, Brazil; and Lisbon, Portugal. Although NPN's posters feature winter-conditioning, these stations in warm countries will use the "Lubricate for Safety every 1000 Miles" slogan.

JOHN D'S BIOGRAPHY

Oil men are keenly interested in the history of John D. Rockefeller—who became a legend in his time—and this is evidenced by book orders NPN is receiving. In our February 19th issue, we published a review of Alan Nevin's recent two volume biography of John D. Rockefeller. Immediately following the review, NPN received orders from different sections of the country for copies. If you're interested, NPN can supply these books, two volumes in a slip case, for $7.50 per set.

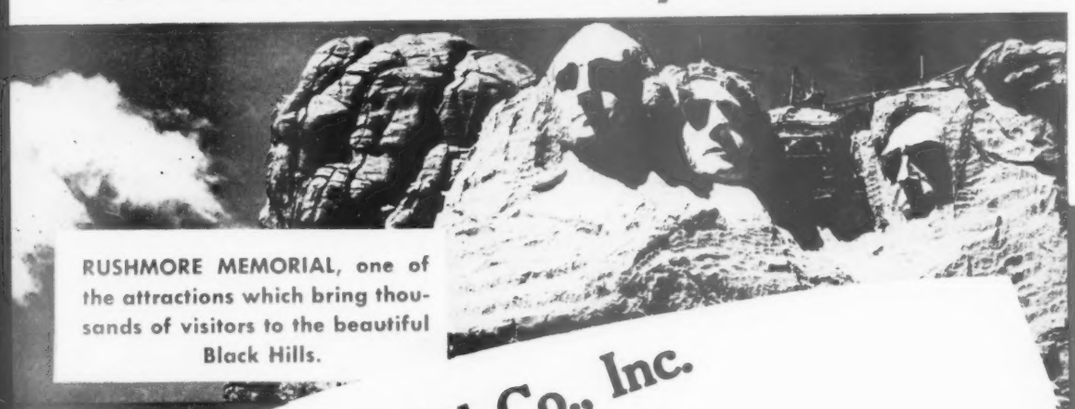
REPRINTS

Some time ago, NPN published an article showing how farmers favor lightweight tractors using gasoline. Since that time, NPN has received orders for nearly 25,000 reprints of the article from one company alone. This company, recognizing that this article would be of great help in pointing out to salesmen and dealers a vast almost-undeveloped market, has supplied copies to salesmen and dealers to read. NPN can supply reprints of its articles in quantities of 100 and up, for marketers to use as sales tools.

NEXT WEEK

Starting with a 210-gal. horse-drawn tank wagon. 40 years ago in St. Joseph, Mich., J. J. Theisen built a business that now covers the entire state and is served by 6 water terminals, 40 bulk plants and 350 service stations. NPN's "man on the spot" recently visited "Jay" and has a first-hand story for the March 12 NPN.

Black Hills, S. D. Distributor



RUSHMORE MEMORIAL, one of the attractions which bring thousands of visitors to the beautiful Black Hills.

FRED E. FANKELL, Gen. Mgr., Puritan Oil Co., Inc.

Puritan Oil Co., Inc.

Wholesale Distributors of SINCLAIR

Rapid City, South Dakota

Aug. 31, 1940

J. V. Dippel, District Manager
Sinclair Refining Company,
Kansas City, Missouri

Dear Mr. Dippel:

Thank you for your congratulations on our continued success with Sinclair products. Yes, we too are proud of the volume of business which we have won in the Black Hills country. And we do not hesitate to say that the quality of Sinclair products has been an important asset to us.

The Puritan Oil Company started over 15 years ago, but the switch to Sinclair products did not come until 1934, or about 6 years back. We were a well established company, doing a very substantial volume, at the time of the change. But with Sinclair products we have added materially to our former gallonage.

Today we have 8 bulk plants in the Black Hills, some of them in new territory for us. On this point I might add that Sinclair has not only respected the territory set aside for us but has granted us new territory as we were in position to develop it. Likewise, the number of our retail outlets has grown substantially with the Sinclair franchise. We had about 40 outlets in 1934. Today we have 60.

I have personally sold several nationally known brands of petroleum products and have had wide experience in the oil industry. I can frankly say that I have never handled any products that have been better received than Sinclair products.

Here in the Black Hills we have thousands of tourists visit us each season. Sinclair's national advertising and the wide use of their credit cards helps us to get a large share of this business. Credit card holders stop at our stations from all over the U. S. A. and Canada.

It is a pleasure to recommend Sinclair, Mr. Dippel, as we have always had both friendly and profitable relations with your good company.

Yours very truly,
Fred E Fankell
PURITAN OIL CO., INC.

MARVIN GRAHAM Station, Lead

DINOSAUR PARK in Rapid City features strange creatures made famous in Sinclair ads.

HEADQUARTERS Offices, Puritan Oil Co., Inc. Rapid City, S. D.

· STATISTICS ·

N. P. N. Gasoline Index

	Dealer T. W.	Tank Car
	Cents per Gallon	
March 3	8.65	5.14
Month ago	8.58	5.12
Year ago	9.60	5.89

Dealer index is an average of "undivided" dealer prices, ex-tax, in 50 cities.

Tank car index is a weighted average of 9 wholesale markets for regular-grade gasoline.

N. P. N. Refinery Index

The Refinery Index shown below represents the return in cents per barrel (42 gallons) from refining a barrel of 36 gravity Mid-Continent crude into its various principal products. The index is calculated by subtracting the current price of crude at the well from the average price of refined products sold at current quoted Oklahoma refinery prices.

Date	Margin
March 3	46.3
Month ago	46.6
Year ago	42.7

Crude Oil Stocks

(U. S. Bureau of Mines figures, thousands of barrels)

Grade or origin	Feb. 15	Feb. 22	Change from Feb. 15
Pennsylvania Grade	4,300	4,264	— 36
Other Appalachian	1,288	1,259	— 29
Lima-Michigan	1,225	1,221	— 4
Illinois-Indiana	20,610	20,637	+ 27
Arkansas	3,408	3,271	— 137
Kansas	8,898	9,003	+ 105
Louisiana:	12,460	12,586	+ 126
Northern	4,478	4,452	— 26
Gulf Coast	7,982	8,134	+ 152
Mississippi	1,011	1,071	+ 60
New Mexico	7,206	7,403	+ 197
Oklahoma	64,375	64,084	— 291
Texas:	82,407	82,853	+ 446
East Texas	19,209	19,263	+ 54
West Texas	16,505	16,234	— 271
Gulf Coast	20,790	21,866	+1,076
Other Texas	25,903	25,490	— 413
Rocky Mountain	15,019	15,090	+ 71
California	35,929	36,448	+ 519
Foreign	2,812	2,593	— 219
Total United States refinable	260,948	261,783	+ 835
Heavy in California	12,086	12,181	+ 95

Inventories, Jan. 31, 1941, of Pennsylvania Oils Other than Lubricating Oils

(Compiled by National Pet. Ass'n. from reports of oil region refiners. Figures in barrels.)

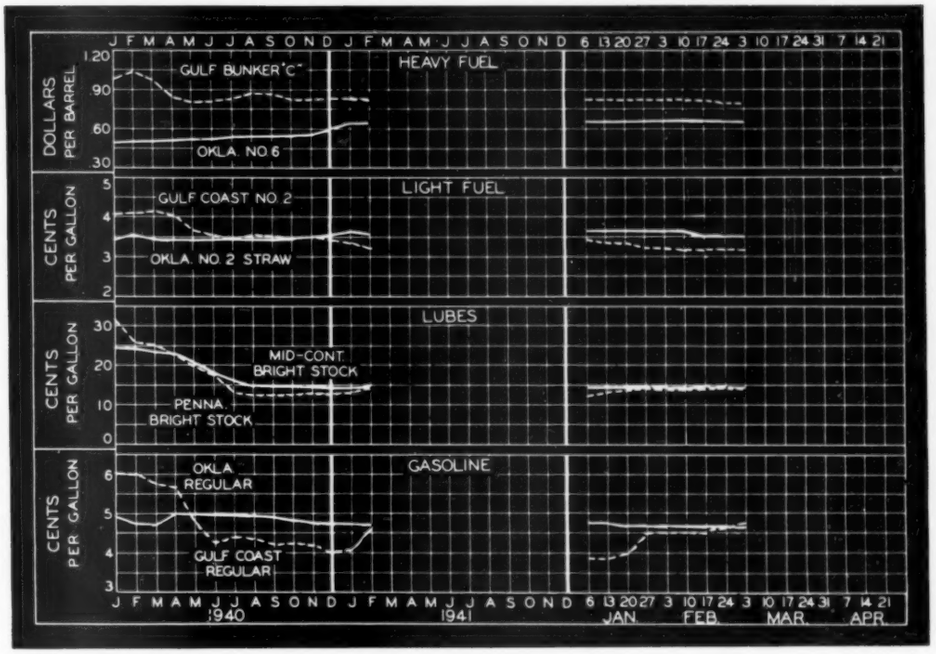
1—Naphthas & Gasoline	
(1) Straight run, unblended and/or unleaded, for sale as motor fuel	42,498
(2) Naphtha and gasoline, for sale for blending or further refining, or held at refinery for further distillation, reforming, blending or leading	138,942
(3) Below 65 octane, not included in (1) or (2) above	9,639
(4) 65 octane & above	358,731
2—Salable naphthas other than motor fuel material (does not include Refinery Process Naphthas)	28,675
3—Kerosine	68,101
4—36-40 gas oil (includes furnace oil)	48,537
5—Fuel oil (not reported above)	25,982
6—Oils held as cracking plant charging stocks	233,415
7—Non-viscous neutral	20,962
8—Wax distillate	103,981
9—Crude petrolatum	17,973
10—Wax (lbs.)	5,858,513

G. C. R. A. Stocks Report

(Compiled by Gulf Coast Refiners Assn. from reports of member companies covering refineries. Figures in barrels.)

	Feb. 15, 1941	Feb. 1, 1941
Gasoline stocks, total (includes aviation, motor fuel & naphtha)	2,038,765	1,944,148
Aviation gasoline	502,070	473,604
Motor fuel	1,483,048	1,415,580
Naphtha	53,647	54,964
Kerosine	268,462	276,930
Diesel gas oil	573,149	592,007
Diesel fuel	227,638	198,195
Gas oils, other types	765,510	610,489
No. 5 fuel oil	75,124	None
Bunker "C" fuel oil	405,790	288,325
Crude runs (daily average)	68,482	58,734

REFINERY TANK CAR PRICES



Crude & Petroleum Products, Supply & Demand, 1940

(U. S. Bureau of Mines figures, thousands of barrels)

	December 1940	November 1940	December 1939*	January-December 1940	January-December 1939*
NEW SUPPLY:					
Domestic production:					
Crude petroleum	110,520	106,904	115,120	1,351,847	1,264,962
Daily average	3,565	3,563	3,714	3,695	3,466
Natural gasoline	4,950	4,841	4,577	55,249	51,650
Benzol†:	298	282	281	3,161	2,498
Total production	115,768	112,027	119,978	1,410,257	1,319,110
Daily average	3,734	3,734	3,870	3,853	3,614
Imports‡:					
Crude petroleum in bond	60	.....	229	1,213	4,648
Crude petroleum for domestic use	4,673	3,932	2,099	41,525	28,447
Refined products in bond	**311	155	625	12,680	18,667
Refined products for domestic use	§3,585	2,861	958	27,498	7,298
Total new supply, all oils	124,397	118,975	123,889	1,493,173	1,378,170
Daily average	4,013	3,966	3,996	4,080	3,776
Decrease in stocks, all oils	2,870	6,872	50	††39,184	41,865
DEMAND:					
Total demand	127,267	125,847	123,939	1,463,989	1,420,035
Daily average	4,105	4,195	3,998	3,973	3,891
Exports‡:					
Crude petroleum	2,074	3,805	4,656	51,600	72,076
Refined products	‡‡4,917	6,084	8,557	78,989	116,883
Domestic demand:					
Motor fuel	46,413	49,074	43,807	589,424	555,509
Kerosine	7,808	6,768	6,613	68,776	60,503
Gas oil and distillate fuels	19,992	17,135	17,168	164,448	138,723
Residual fuel oils	33,665	29,693	31,262	335,655	319,738
Lubricants	1,875	2,449	1,825	24,657	23,713
Wax	113	109	157	1,273	1,162
Coke	703	498	618	7,018	7,108
Asphalt	1,313	1,790	1,414	28,180	27,093
Road oil	169	298	71	7,847	7,846
Still gas	5,672	5,587	5,761	71,720	68,779
Miscellaneous	219	188	206	2,175	2,223
Losses	2,334	2,369	1,824	22,227	18,679
Total domestic demand	120,276	115,958	110,726	1,323,400	1,231,076
Daily average	3,880	3,865	3,572	3,616	3,373
STOCKS:					
Crude petroleum:					
Refinable in U. S.	264,079	263,163	239,978	264,079	239,978
Heavy in Calif.	11,906	12,257	13,330	11,906	13,330
Natural gasoline	5,704	6,102	4,421	5,704	4,421
Refined products	282,265	285,302	268,109	282,265	268,109
Total, all oils	563,954	566,824	525,838	563,954	525,838
Days' supply	137	135	132	142	135

* Final figures. † From Coal Economics Division. ‡ Imports of crude as reported to Bureau of Mines; all other imports and exports from B. F. D. C. ** Exclusive of 63,000 imported into non-contiguous territories. § Exclusive of 96,000 imported into non-contiguous territories. †† Increase based on preliminary stocks of Dec. 31, 1939. ‡‡ Exclusive of 12,000 exported from non-contiguous territories but inclusive of 457,000 barrels shipped from U. S. to territories.

THE SHELL PHOSPHATE PROCESS

SELECTIVELY REMOVES H_2S FROM SOUR NATURAL GAS (OR INDUSTRIAL GAS) CONTAINING CO_2

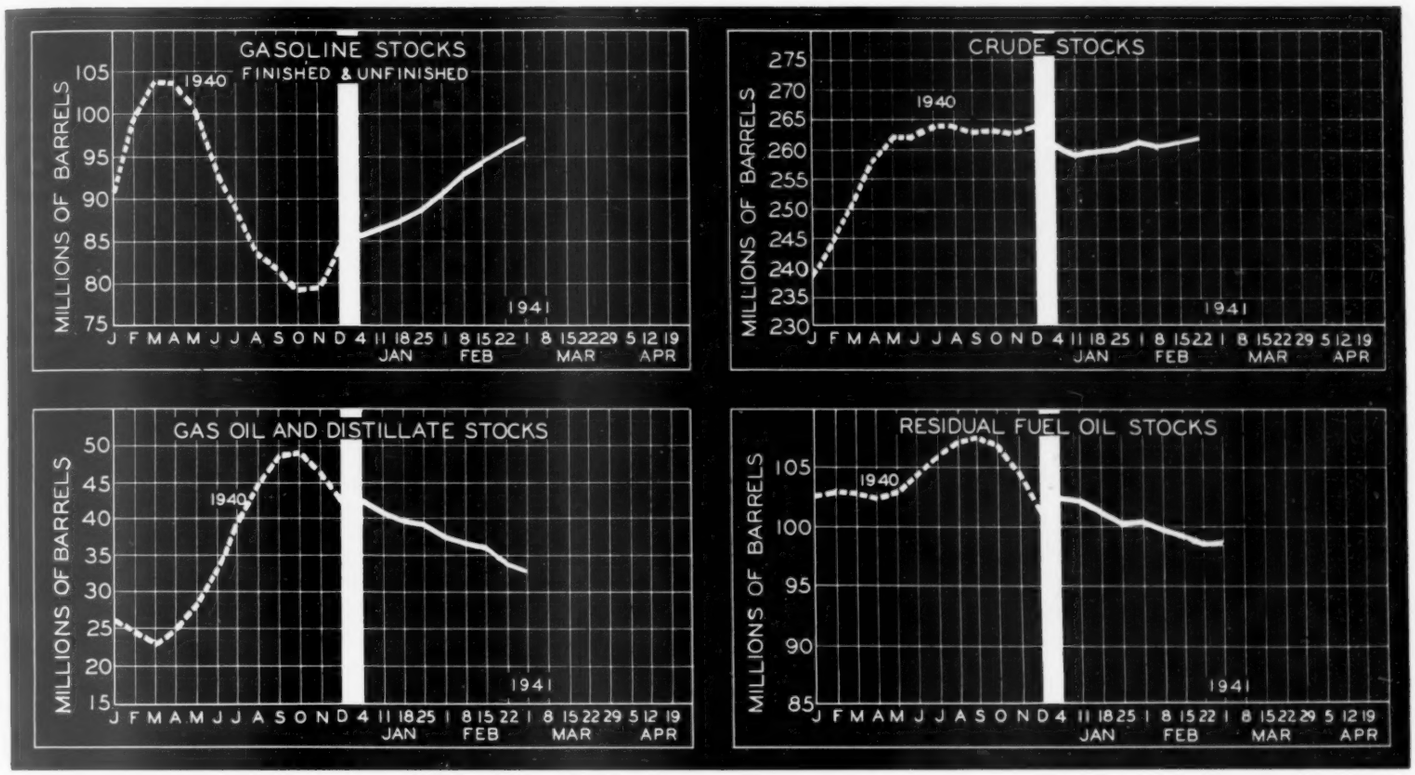
DIRECT FIRING CAN BE USED
IN THE REGENERATION
OF THE FAT SOLUTION

These are just two of a number of characteristics of the Phosphate Process which can provide you capital and operating economies

SHELL DEVELOPMENT COMPANY

LICENSORS: Shell Phosphate Process, Shell Solutizer Process,
and Shell Regenerative Mercaptan Removal Process

•STATISTICS•



A.P.I. Report of Refinery Operations

(Figures in Thousands of Barrels of 42 Gallons Each)

Districts	Daily Average Crude Runs to Stills Week Ended		Per Cent of Reporting Capacity Operated Week Ended		Gasoline Production at Refineries incl. Natural Blended Week Ended		Total Stocks Finished & Unfinished Gasoline Week Ended		Total Stocks Gas Oil & Distillates Week Ended		Total Stocks Residual Fuel Oil Week Ended		Stocks Aviation Gasoline Included in Finished & Unfinished Gasoline Total Week Ended	
	Mar. 1	Feb. 22	Mar. 1	Feb. 22	Mar. 1	Feb. 22	Mar. 1	Feb. 22	Mar. 1	Feb. 22	Mar. 1	Feb. 22	Mar. 1	Feb. 22
East Coast	558	579	86.8	90.0	1,412	1,454	20,383	20,381	11,905	12,150	8,536	9,326		
Appalachian	121	124	85.2	87.3	436	434	3,219	3,210	418	426	486	485	**East Coast**	
Ind., Ill., Ky.	600	578	89.6	86.3	2,109	2,149	18,907	18,383	2,857	3,061	3,125	3,169	760	782
Okla., Kans., Mo.	293	287	90.7	88.9	946	*955	8,731	8,575	1,185	1,240	1,946	1,951	**Interior**	
Inland Texas	119	122	71.3	73.1	622	608	2,296	2,247	375	375	1,460	1,488	797	789
Texas Gulf	865	887	90.7	92.9	2,749	2,770	14,544	14,310	4,957	5,133	6,939	6,720		
La. Gulf	138	132	86.3	82.5	392	326	3,357	3,348	915	966	1,974	2,100	**Gulf Coast**	
N. La. Ark.	47	50	90.4	96.2	135	164	577	570	290	294	538	519	3,054	2,947
Rocky Mt.	36	46	52.9	67.6	223	207	1,605	1,547	164	166	443	446	**California**	
California	466	445	63.8	61.0	1,342	1,267	16,368	16,391	10,084	9,985	71,520	70,747	1,497	1,514
Reported	3,243	3,250	82.9	83.1	10,366	10,334	89,987	88,962	33,150	33,796	96,967	96,951	6,108	6,032
Estimated Unreported	342	340			1,415	1,410	6,930	6,850	575	585	1,680	1,680	240	235
U. S. Total†	3,585	3,590			11,781	11,744	96,917	95,812	33,725	34,381	98,647	98,631	6,348	6,267
U. S. Total 3-1-40†	3,509				11,165		99,295		24,640		103,192		4,137	

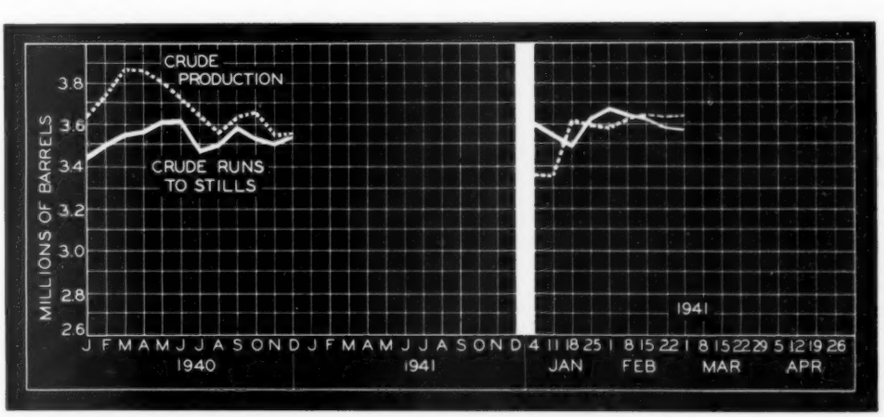
*12% of reporting capacity in this district did not report gasoline production. †Estimated, U. S. Bureau of Mines basis.

U. S. Crude Oil Production

(American Petroleum Institute figures)

	—WEEK ENDED— Mar. 1 Barrels (Daily Average)	Feb. 22 Barrels (Daily Average)
Oklahoma	413,250	406,500
Kansas	202,550	207,100
Nebraska	4,300	3,050
Texas	1,345,000	1,350,450
Louisiana	292,350	292,150
Arkansas	70,550	70,500
Mississippi	20,400	18,000
Illinois	331,150	321,700
Indiana	20,900	20,400
Eastern (Ill. & Ind. excluded)	94,300	86,300
Michigan	40,200	39,400
Wyoming	81,050	83,800
Montana	18,450	18,900
Colorado	3,700	3,600
New Mexico	104,200	103,800
California	589,900	604,000
Total U. S.	3,632,250	3,629,650
Crude Imports	116,000	130,860
Total New Supply	3,748,250	3,760,510*

*Corrected.


CRUDE PRODUCTION
CRUDE RUNS TO STILLS
1941
MILLIONS OF BARRELS
3.8
3.6
3.4
3.2
3.0
2.8
2.6
J F M A M J J A S O N D J F M A M J J A S O N D 4 11 18 25 1 8 15 22 1 8 15 22 29 5 12 19 26
1940 1941 JAN FEB MAR APR

Hines Holt Baker • • •

● "I never missed paying the rent or my board."

Hines Holt Baker, Houston, new vice-president of Humble Oil & Refining Co., made this remark recently when practically forced to disclose some of his past history. He was thinking of his early law firm days with brother Rex. Baker & Baker was the "team," and it's still in existence, so to speak, as Rex is also an attorney for Humble. But our present story is about brother Hines.

Born in Texas, Sept. 22, 1893, Mr. Baker got much of his early education via the home study method and at 17 applied for and received a first grade teacher's certificate. At 19, he was superintendent of school in Saratoga, Hardin County with a six-teacher staff. About this time, the oil boom broke on what was known as the East Side where H. C. Wiess, now president of Humble, was a young oil operator. But neither Mr. Wiess nor Mr. Baker were to be associated for several years.

For a short time, Mr. Baker returned to the University of Texas where lack of funds had forced him to leave the year before he commenced teaching. By the time he left the university in 1917, he had both an A.B. and a law degree. Failure to meet stiff physical requirements at first kept him out of World War I, for he had left college to volunteer. But later he was admitted to the Army and commissioned a second lieutenant of field artillery at Kentucky's Camp Zachary Taylor.

The law firm of Baker & Baker followed the war, although Rex was still in the Army.

On Oct. 1, 1919, Hines Baker joined Humble's legal staff and in 1937 became a director, later taking charge of the refining and sales departments on the death of Stuart A. Giraud. Following the annual stockholders' meeting, Feb. 10 of this year, Mr. Baker was elected vice-president, continuing his responsibility for the refining and sales departments.

Mr. Baker is married and has three children. One boy, 17, is now attending Phillips Academy at Andover.

Outside interests of Mr. Baker include chairmanship of the Development Board of the University of Texas, an organization devoted to promoting gifts for the university. He has served several years as steward and Sunday school superintendent at Bering Memorial Methodist Church in Houston.

NATIONAL PETROLEUM NEWS

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Elliott Uses Facts of 1916 To Cite 'Gas' Pump Shorting

N. P. N. News Bureau

WASHINGTON, March 3. — Facts cited by Harriet Elliott, consumer representative on the National Defense Advisory Commission, in her recent bulletin "Check Your Weights and Measures", charging gasoline pumps with short measuring, are 25 years old, it was found by NATIONAL PETROLEUM NEWS.

Story in which the defense consumer member delves back into history for evidence against gasoline pumps was carried on page 11 of the Feb. 26 issue of NPN.

In her bulletin, Miss Elliott stated, without mention of dates, "when the first inspection of gasoline dispensing pumps was made in Los Angeles county, 51% were found to be incorrect." This was based on data gathered 25 years ago, according to the Division's own files.

Paraphrasing one statement in a 1939 report of the Los Angeles county sealer, consumer member's bulletin disregarded another statement in the same report which pointed out that 15% of the pumps found inaccurate in 1939 told "a much different story from that present when our Department first began its work over 25 years ago. At that time, 51% of the pumps were found inaccurate".

Can't Locate Material

The assertion attributed to the American Automobile Assn., also contained in the Elliott bulletin, that motorists were "being robbed by dishonest operators of retail gasoline pumps of a sum conservatively estimated at $20,000,000 annually", apparently refers to a statement made by that association in 1928, 13 years ago.

Consumers Division, however, said it had been unable to locate in its files, material on which statement relating to American Automobile Assn. was based.

Press release issued by American Automobile Assn., and dated Oct. 13, 1928, refers to "its recent declaration that motorists lose a minimum of $20,000,000 a year through short sales of motor fuel," but a copy of the declaration could not immediately be located.

American Automobile Assn., during 1927 and 1928, was interested in securing more adequate state weight and measure inspection laws and issued several statements on the subject, but insofar as could be determined, organization has made no public statements on the subject before or since that time.

Defense Commission Consumer Division explained, however, that it had no intention of singling out gasoline people in its recently issued bulletin, and in future distribution of publication will indicate dates of the gasoline pump surveys to which the bulletin referred.

Statement was made for Miss Elliott, who has been ill with laryngitis, by John Cassels, her executive assistant.

"Consumers Division also had no intention of misrepresenting the gasoline pump situation," Cassels said, adding, "whole purpose of bulletin was to call attention to the importance of weight and measure inspection services available and the need for keeping them up to highest possible standards."

Government Purchases of Motor Fuel To Be 'Stepped Up' by July 1, 1941

N. P. N. News Bureau

WASHINGTON, March 1.— Mounting federal demand for motor gasoline growing out of the defense program is reflected in the estimates of fuel needs for the fiscal year beginning July 1, submitted to the Treasury Procurement Division by the Army and Navy.

Indicating extent to which government purchases of motor fuel are being stepped up by new mechanized equipment and more extensive military maneuvers, incident to the present Army and Navy expansion, estimates are said to call for big increases in deliveries all over the country and for "unheard of amounts" in some localities.

Estimates are now being compiled by Treasury Procurement Division for use in the invitations, to be issued around March 15, for motor fuel bids for the July-September quarter.

An illustration of how potential military consumption of gasoline is being increased by Army and Navy acquisitions of new motorized equipment, has been provided by Major General Thomas Holcomb, Commandant of Marines, in his recent testimony before the House Appropriations Committee during hearings on the fourth supplemental national defense appropriations bill.

Raising the strength of the Marine Corps from 25,000 to 45,000 men has required the corps to double its combat transportation, General Holcomb told the committee. This, he said, means the Marine Corps will have to increase its minimum motorized equipment requirements as follows:

Ambulances, from 9 to 18; five-passenger cars, 7 to 14; motorcycles, 88 to 176; light tractors, 59 to 118; medium tractors, 41 to 82; heavy tractors, 1 to 2; half-ton trucks, 184 to 368; half-ton reconnaissance trucks, 29 to 58; one-ton trucks, 183 to 366; ton-and-a-half trucks, 139 to 278; two-ton trucks, 15 to 30; three-ton trucks, 30 to 60; gasoline tank trucks, 1 to 2; light repair trucks, 12 to 24; tractor trucks, wrecking, 5 to 10; station wagons, 38 to 66.

1c Processing Tax Fought by Refiners In Lone Star State

Special to N. P. N.

AUSTIN, March 1.—Capitol observers are giving a bill by Rep. Fred Harris to place a 1c per gal. tax on all gasoline refined in the state little chance of passage in its present form, although some concede it might pass if the tax were whittled sharply.

The bill has been the subject of heated testimony in house committee hearings, with protests coming from big and little refiners and labor organizations representing the refinery workers on the coast.

Rep. Harris said his bill would raise $80,000,000 annually and would replace the 4c per gal. state gasoline tax paid by Texas consumers at their filling stations.

Harris said the object of his bill is to relieve Texas consumers of the tax burden by spreading it out to consumers all over the nation. Texas consumes only a small portion of the gasoline it refines, he pointed out.

Would Harm Competition

The house committee on revenue and taxation last week heard Jack Blalock, Houston attorney appearing for Baird and Premier refineries, testify that

(*Continued on page* 22)

Canada Grants Powers to Fix All Oil Prices

Special to N. P. N.

OTTAWA, Can., March 3.— Powers for complete regulation of the oil industry, from the well to the consumer, have been conferred upon Canadian Oil Controller George R. Cottrelle. Order was carried in an extra edition of the Canada Gazette, official publication for the Dominion, dated Feb. 27.

Under powers originally granted to the Oil Controller, June 28, of last year, he was permitted only to fix maximum prices and maximum mark-ups, or margins. The new regulations are an extension of his powers.

Controller's office reports that these additional powers have been in the making for some time. It is understood that they are not intended to cover any existing condition, but designed to provide the control to cope with situations which might later arise.

First step in Canada's fixing of gasoline prices was reported last week (See NPN Feb. 26, page 12) when Mr. Cottrelle ordered a reduction in the spread between retail and tank wagon prices in Nova Scotia from 4.5 to 4c per gal.

Power to Fix Prices

Under the new regulations, the Controller has the power to fix maximum and minimum prices, and to regulate any practice or mode of dealing in or with oil, which might tend to increase the price, or affect its orderly purchase or sale.

New regulations state that the Oil Controller shall have the power "to take possession of or otherwise acquire any oil, wherever found, and to engage generally or particularly in any dealing in or with oil.

"To enter on, take possession of and utilize any undertaking, land, plant, refinery factory, building or place used or capable of being used for any dealing in or with oil, and also to take possession of and utilize any equipment (drilling, producing, refining, marketing, or transporting) for the purpose of operating same or for any other purpose."

Controller also was granted power to limit the quantity sold

by any company; to prohibit or regulate the installation of equipment for producing, refining, or marketing; to construct, or require companies to make changes or additions to refining or marketing facilities; to issue or suspend licenses to engage in the oil business; to regulate and fix the type of oil to be produced, refined or marketed.

Order also permits compensation to the companies from which facilities are commandeered. Deputy Oil Controllers are empowered to exercise any of the powers conferred on the Controller, subject to his restrictions, and, in all cases, to review by him.

Motor Vehicle Controller Appointed in Canada

Special to N. P. N.

OTTAWA, Feb. 28.—John H. Berry a dock engineer formerly connected with General Motors has been appointed Motor Vehicle Controller for Canada.

Munitions Minister Howe, in announcing the appointment, said that Mr. Berry's powers are wide enough to regulate the entire industry.

Texas Lawmakers Hit Federal Oil Control

Special to N. P. N.

AUSTIN, March 4. — A resolution urging opposition to any move toward Federal oil control was on way to Congress Tuesday after its adoption by Texas Senate.

Sponsored by Senator T. C. Chadick and Allan Shivers, resolution said that Texas, with co-operation of oil industry and existing regulatory agencies, could deal efficiently with any emergencies that might develop.

New Fuel Specifications Get Federal Approval

N. P. N. News Bureau

WASHINGTON, March 4. — Federal motor fuel specifications stepping up octane rating of premium grade gasoline from 77 to 80, and regular grade gasoline from 70 to 72, have been approved by Federal Specifications Board.

New specifications, which will be used by Treasury Procurement Division in invitations for gasoline bids for July-September quarter differ, in case of premium fuel, from present specifications by eliminating altitude correction for more than 6000 ft., and by providing lower distillation temperatures of 257° F. for 50% point and 356° F. for 90% point. No change from existing specifications si made for regular grade except increase in octane rating.

Farmers Curtailing Use Of 'High Tax Gasoline'

WASHINGTON, March 4.—National Highway Users Conference reports its current gasoline tax survey has developed evidence that many farmers in northeastern states are curtailing gasoline purchases because of the high tax.

Survey, conference says, is intended to show gasoline taxes and automobile registration fees are a heavy burden on the low income citizen who uses the highways.

Radio Oil Program To be Nation-Wide

TULSA, March 4. — National Broadcasting System's nation-wide facilities will be used March 8 at 6 p. m. (CST) to broadcast a coast-to-coast program from Tulsa on the oil industry and its relation to national defense.

Sponsored by National Assn. of Manufacturers, side trips by radio will be taken to the Oklahoma City field, where Oklahoma's Gov. Phillips and E. C. Moore, prominent oil producer, will participate in the program.

Part geology plays in the discovery of oil reserves will be told by William Green, Tulsa, Seismograph Corp., while that part having to do with oil field tool manufacture will probably be discussed by Frank Hinderliter, Tulsa, from the replica of the Drake Well at Tulsa's petroleum exposition grounds.

Phil H. Bohart, Tulsa, assistant to Gulf Oil Corp.'s vice-president, will explain the use of pipelines in the transportation of oil. Background for this talk will be supplied from a pump house near Cushing, Okla.

From Mid-Continent Petroleum Corp.'s West Tulsa refinery, Mid-Continent refinery Supt. D. H. Morgan will explain refinery processes.

Research and the discovery of by-products of oil will be outlined by a representative of Phillips Petroleum Co. Synthetic rubber and its manufacture as a petroleum by-product will come in for discussion on this phase of the program.

William G. Skelly of Tulsa, president of Skelly Oil Co., will speak on the distribution of petroleum products.

OTTAWA, March 1.—Canadian retail gasoline sales for the first 10 months of 1940 totaled 754,221,000 gals. compared with 684,399,000 gals. for the same period in 1939, according to a report released this week.

Pure's Surplus Earnings Rise in 1940 Despite Lower Prices, Reports Dawes

N. P. N. News Bureau

CHICAGO, March 3.—Despite the continued decline in gasoline prices during 1940 and generally unfavorable prices for other petroleum products handled, Henry M. Dawes, president of Pure Oil Co. said that Pure's net surplus earnings in 1940 were $8,718,057, an increase of $427,639 over 1939. This statement was made in Pure's annual report to its stockholders.

With the average retail price for gasoline at "the lowest it had ever been in any year since records were kept", Mr. Dawes said:

"It is a matter of satisfaction that the marketing division showed a profit in 1940 in spite of generally unfavorable price situations."

'Gas' Sales in 1940

Pure's 1940 gasoline sales were 681,500,000 gals., retail sales being 659,000,000 gals., an increase of 5% over 1939. "This is slightly less than the average for the industry, but it is made in spite of the fact that the company withdrew from marketing in a number of eastern states as recorded in the last annual report," Mr. Dawes said.

On the subject of oil marketing, the president reported that "it is the conviction of the management that the greatest improvement in marketing gasoline must be through increased sales per unit of outlet rather than extension of territory and capital investment in facilities."

Regarding transportation, Mr. Dawes said that Pure has put a tanker in service for transporting petroleum products on the Great Lakes from the company's Toledo, O., refinery to a terminal at Superior, Wis.

Transportation Plans

"We are in the course of constructing the first unit of a fleet to transport relatively large volumes of petroleum products from our Smiths Bluff, Tex., refinery to points on the Mississippi and Ohio rivers. The economics of this transportation over considerable areas is apparent, and it is possible that, with future developments, these barges may be operated to as distant a point from Texas as Minneapolis."

On preparedness, and the industry's ability to meet present and future defense demands, Mr. Dawes said this country is not only able to supply the needs of this country, but by merely opening the valves, would be able to supply the entire world.

Pure's taxes in 1940 totaled $3,788,191, compared with $3,372,016 in 1939. Cost, operating and general expenses in 1940 were $73,379,455, compared with $73,907,568 in 1939.

Gross operating income in 1940 was $95,675,216 compared with $94,286,568 in 1939.

Ashland '40 Profit Totals $696,938.47

N. P. N. News Bureau

CLEVELAND, March 3.—Consolidated net profit of Ashland Oil & Refining Co., during 1940, was $696,938.47 states Paul G. Blazer, president, in the company's annual report released this week. Consolidated net profit in 1939 was $746,889.89.

With margin of profit per gallon declining during 1940, the company reports total sales of petroleum products at 137,164,634 gals., an increase of 22% over 1939. Mr. Blazer said:

"The margin of profit per gallon declined during the year as indicated by the fact that our profit for 1940, before income taxes, increased only 4.8%, and, after increased income taxes, showed a decline of 6.7%. Gasoline sales prices averaged approximately ½c per gal. less than for the previous year, whereas the cost of crude oil and supplies showed an increase."

Regarding planned construction, the president reports that "additional facilities now under construction or proposed, include an increase of approximately 20% in refining capacity, a new towboat in addition to one under construction, three new oil barges and the completion of a river-rail terminal in the Pittsburgh district."

Money spent during 1940 on expansion and improving present facilities totaled $1,040,331.63. "Our new facilities enable us to make important reductions in our transportation and manufacturing costs," Mr. Blazer said.

Tax Evasion Case Ends in Midwest

Special to N. P. N.

MINNEAPOLIS, March 3.—A suspended sentence of up to five years on a second degree larceny charge was imposed today on Robert Tousley, Anoka, Minn., head of Wholesale Petroleum Co., in connection with withholding state gasoline taxes.

Court was told part of the $9402 involved had been paid the state and commitments made to complete restoration of the entire amount. Mr. Tousley operates 12 service stations.

Tank Truck Drivers Stage Akron Strike Signs Say, 'No Gas'

N. P. N. News Bureau

CLEVELAND, March 4.—It was estimated that between 65 and 80% of the stations in Akron, O., were displaying "No Gas" signs today as the strike of Summit county oil truck drivers went into its fifth day.

Drivers walked out on the afternoon of Feb. 28, after demands for an increase of 8% in wage rates were not met, according to the union. Negotiations have been carried on since between oil companies affected and representatives of the union. In a meeting late March 4, M. J. Crosetto, conciliator for the U. S. department of labor, entered the negotiations.

While the oil drivers strike first threatened an entire tie-up of truck transportation in Summit county, the union admits now that is no longer a possibility.

Only gasoline and motor oil deliveries in Summit county are being affected, the union and several oil company representatives stated. Home fuel oil deliveries are continuing unaffected. Likewise, deliveries from Akron to the surrounding counties of Medina and Portage are being allowed.

While estimates were that 65 to 80% of the stations were forced to close because of a lack of gasoline, trackside stations are reported operating, and with the exception of a flare-up between AFL drivers and CIO union members at one Akron station Friday, at which no one was seriously hurt, no violence was reported.

Army May Get Fuel At Roadside Pumps

N. P. N. News Bureau

TULSA, March 3. — When the U. S. Army's estimated 300,000 pieces of rolling equipment take to the road, fuel requirements of these mechanized divisions may be supplied from any cross roads service station or bulk plant, William H. Hubner, Ethyl Gasoline Corp., refinery technologist told members of the Tulsa section of the American Chemical Society here last week.

The oil industry, he said, is in position to supply on short notice almost unlimited quantities of the 80 octane all-purpose gasoline needed by the country's mechanized forces.

As an example of present-day gasoline efficiency, Mr. Hubner referred to the recent Gilmore economy run tests in California establishing the highest mileage records in history. Further improvements were visualized by the Ethyl technologist, citing possibility of a 25% fuel economy in the future.

Speaking of the future, Mr. Hubner said manufacturers will have an opportunity to utilize the advantages of higher octane motor fuel through engine designs—either through higher compression ratios or supercharging, or a combination of the two. While there are problems facing the engine designer and the manufacturer of motor fuels, the problems can be solved through closer co-operation between the two, he said.

'Pay Off' Charges Fly In Texas House

AUSTIN, March 4.—Charges that Texas Railroad Commissioners "have to pay off fellows who helped them get into office" and that "influencing practicing lawyers" have brought about inequities in oil proration, were on record Tuesday after the first day of House Committee hearings on bills to establish separate Oil-Gas Commission.

These statements made by Jake Hamon, Dallas Independent, after other witnesses expressed opinion that new three-man commission appointed by governor would take proration out of politics. Still others said commission duties have grown so, that board is unable to do justice to oil industry. Opponents of bill will testify Wednesday.

Low Fuel Oil Price Called Unprofitable

N. P. N. News Bureau

LOS ANGELES, March 1. — Dana Hogan, president of the San Joaquin Valley Oil Producers Assn., in an open letter to the industry this week, stated that at current fuel oil prices profitable operation by many oil producers was impossible.

He asserted that in view of the increased demand for heavy crude and fuel oil and the large withdrawals of both from storage last year to meet the demand, no good reason exists for the present low posted prices.

"The present Los Angeles harbor price for expensively produced domestic fuel oil is only 75c a bbl.," he pointed out, "while in New York harbor cheaply produced foreign fuel is bringing $1.35 per barrel."

Mr. Hogan declared that an adjustment of crude prices, bringing them back to the schedule in effect in January, 1940, was justified.

California Gasoline Taxes Due to Rise in 1941

N. P. N. News Bureau

LOS ANGELES, March 1.—California's gasoline tax collections in 1941 are headed toward even higher levels than reached in 1940, when all previous records were broken, announces State Board of Equalization.

Guthrie Hopes Raised As Well Comes In

N. P. N. News Bureau

TULSA, March 4.—Guthrie, Okla., has a vital interest in the No. 1 Donoghue Heirs well nearby, because Oklahoma City deprived this city of its designation as state capital and folks from Guthrie would like very much to do some "chiseling" on Oklahoma City's record as an oil producing city.

The oil hopes of Guthrie are based on the Donoghue well drilled by Sunray Oil Co., Fain Drilling Co. and Continental Oil Co. Well made 267 bbls. of oil Sunday in 2 hours with an estimated 2,000,000 cu. ft. of gas daily, it was said. Oil is reported to have tested 46 gravity. Testing will continue this week. Expressions from those active in the Guthrie area indicate belief that the well is in the center of a "pool of size."

J. M. Feldman Heads New Lube Oil Group

N. P. N. News Bureau

LOS ANGELES, March 1.—Organization of the Lubricating Oil Manufacturers and Marketers Assn. has been completed with the adoption of the constitution and election of the directors.

The new board, which is representative of Pennsylvania, Mid-Continent, western and reclaimed oil interests, consists of J. M. Feldman, Golden Bear Oil Co., president; Clarence Haserot, Pennant Oil & Grease Co., vice-president; Warren G. Brown, Paroline Refinery; A. Lieberman, Petroleum Marketing Co.; Frank Reed, Master Lubricants; Jean Sarlin, Golden State Oil & Grease Co.; Clarence F. Krone, Petrol Corp.; and Earl E. Perry, Sunset Oil Co., alternate.

Harvey Harris has been appointed secretary of the Assn.

J. M. Feldman

Total of 25 Civil Actions Now Filed Against 7 'Majors' in Madison Area

Special to N. P. N.

MADISON, Wis. — Filing of 12 new treble damage suits aggregating $1,396,000, against seven major oil companies, has increased to 25 the total number of civil actions brought in this district as a sequel to the price-fixing conspiracy case tried here in 1937 and 1938.

The 12 most recent suits, entered by midwestern jobbers and consumers, were initiated in the Superior, Wis., branch of the district, on complaints similar to that of the Northwestern Oil Co., Superior. This firm, which claims its business was damaged to the extent of $750,000 as a result of the alleged conspiracy, has demanded a recovery of three times that amount. It is the largest sum sought in any of the individual suits.

The Northwestern Oil Co. has filed its bill of particulars, as ordered by Federal Judge Patrick T. Stone, and the 7 defendants have filed their joint answer asking dismissal of the complaint. No definite time has been set for trial of the case.

The court, however, recently extended to March 15 the time for filing bills of particulars in 12 other jobber and consumer suits filed in the Madison branch and stayed all proceedings until the plaintiffs deposit $200 with the court as security of costs. The order also granted the defendants an extension until March 25 to answer the complaints.

Defendants in all the cases are Mid-Continent Petroleum Corp., Socony Vacuum Oil Co., Continental Oil Co., Pure Oil Co., Sinclair Refining Co., Shell Oil Co., and Phillips Petroleum Co.

Plaintiffs in the recently filed suits in Superior include Westland Oil Co., Independent Oil Co., 906 Master Service Co., Fisher Oil Co., O'Brien Oil Co., Superior Refining Co., Highway Oil Co., Petroleum Service Co., Golden Rule Oil Co.; Onstead County Oil Co., Sterling Oil Co., and Consumers Oil Co.

Southwest Prepared to Supply Increased Demands for Crude

N. P. N. News Bureau

TULSA, March 3. — Southwestern producing states were prepared here to supply the increased demand for crude indicated for March by the Bureau of Mines. Texas, Louisiana, Kansas and New Mexico boosted March production allowables by what may eventually amount to almost 40,000 bbls. daily.

Texas revised its long-range proration order to allow the state's producers a total net allowable of 1,352,489 bbls. daily. Panhandle area wells will be shut in 5 days, East Texas 9 days and other wells 10 days during the month. Allowing for underproduction of its order, commission estimated actual Texas flow will be about 1,305,152 bbls. daily or 22,248 bbls. below the Bureau of Mines' demand estimate.

Shifting of Quotas

There was also a considerable shifting of allowables among various fields according to the type of crude they produce. It was pointed out at the hearing that there is a shortage of crudes which produce a large amount of lubricants, and a surplus of oil from which the principal product is gasoline. Fields producing the lubricant type were given preferred treatment in the new order.

The current 60-day order will not expire until March 31, and the new order will amend it according to the findings at the state-wide hearing.

Various fields now exempt from shutdown days because of physical reasons will continue to be exempt, the commission said.

The March net daily average will be 22,352 bbls. greater than the production reported on Feb. 22.

Louisiana upped its March allowable 11,248 bbls. to 306,190 bbls. daily average. This is 16,890 bbls. above the Bureau of Mines' forecast.

With eastern purchasers looking Kansas over as a potential source of crude supply, and in line with the Bureau's forecast, Kansas Corporation Commission set the sunflower state's allowable at 194,200 bbls. daily. An additional 4000 bbls. reserved for new wells, would bring total Kansas allowable to 198,200 bbls. daily.

Looking Over Kansas

Citing the increase in purchase nominations for Kansas crude, Conservation Director Morgan told the Kansas commission that "various eastern purchasers are looking over the state to decide whether they will purchase oil in Kansas."

While admitting the possibility that Kansas might supply eastern markets, he added it was "hardly probable."

Based on the "fact the state's oil industry is beginning to feel the effect of the national defense program", New Mexico increased its March allowable 4000 bbls., to 110,000 bbls. daily. This is 6000 bbls. above the Bureau's demand forecast.

Oklahoma will continue to produce at around the 400,000-bbls. mark, despite a forecast by the Bureau of a 437,400-bbl. demand for its oil.

California Producers Give 5 Reasons For Favoring Oil Compact Membership

N. P. N. News Bureau

LOS ANGELES, March 1.—Membership by California in the Interstate Oil Compact has been recommended in formal resolutions adopted by the board of directors of the Oil Producers Agency, as well as by statements issued on behalf of the agency by its president, L. L. Aubert, Bankline Oil Co., and its executive vice-president, Rush M. Blodget.

The Agency has stressed following reasons for supporting the Compact:

First, membership in the Compact places another obstacle in the path of federal control of the oil industry. The Agency opposes federal control, not only because of its stultifying effect on that industry but also because the extension of centralized power over one industry threatens the eventual throttling of independence in all industries.

Would Aid Other States

Second, California's adherence to the Compact will encourage the present member-states to continue their efforts to conserve our important natural resources of oil and gas.

Third, the Compact provides for strictly advisory action. The Compact Commission has no compulsory or binding power on member-states.

Fourth, by membership in the Compact, California would contribute its share to the solution of oil-industry problems connected with production. The Compact provides a clearing house for the discussion of the means and procedure to prevent waste and to apply methods of increasing ultimate recovery of oil. Lessons that have been learned the hard way by one state can be adopted without such disadvantages by the other co-operative states.

Fifth, California already has on its statute books laws of the state's own choosing on all subdivisions of Article III of the Compact. These acts cover gas oil ratios, water infiltration, escape of gas, fire hazards, well spacing, waste of reservoir energy.

'Treaty' To Prevent Waste

Only California can decide whether these laws are adequate. No other state, or states, in the Compact can or could interfere or force California to adopt other or different laws. Nor could the state be penalized or ejected for failure to accept the wishes of any or all other states.

In short, in the opinion of the Agency, the Compact is a treaty for the prevention of waste. It cannot control production. It has concern only with physical waste. It contains no penalties for non-compliance.

BULLETIN

LOS ANGELES—Resolutions approving the proposal that California become a member of the Interstate Oil Compact were passed by the board of directors of the California Oil & Gas Assn., as a result of the votes cast by its members in favor of the proposition. Ballots showed that 87% of those voting endorsed the plan.

Pennsylvania Compact Entry Is Still Undecided

HARRISBURG, Feb. 28.—Governor James indicated Pennsylvania is considering joining the Interstate Oil Compact Commission but added "there has been no decision reached."

The governor told newspapermen today that "there has been some correspondence from several people, both inside and outside the state, on this matter but there has been no conference on it. Likewise there has been no decision."

Pennsylvania legislators previously indicated that a survey of oil interests in West Virginia, New York and Ohio is being taken with the idea of finding out how these states stand on joining the Compact.

Texas Seeks To Eliminate 'Dead Wells', Sends Questionnaires to All Producers

Special to N.P.N.

AUSTIN, March 1.—Seeking to eliminate dead wells from the production schedule, Texas Railroad Commission is sending questionnaires to every producer and well owner in the state asking the status of their wells.

Questionnaire contains an affidavit which must be signed before a notary, and the paper must then be returned to the commission through the mail, making possible federal prosecution for false information.

Producers must fill in the number of the district, name of field, the county, and name and address of the operator.

Also asked is number of the lease and well; depth of the top of producing sand, total depth of well, status of the well—whether flowing, pumping, lift or dead—,the daily schedule allowable, and the amount of production during test in oil, water and percentage of water. Operators are also asked to say yes or no to the question: does the well make its allowable?

Commissioners said they had reason to believe that some operators are using the production granted dead wells and applying it on producing wells, thus giving the live wells more than their share of allowable.

Prorating of Wells

Among proposed laws introduced in Texas House last week was one by Rep. Clayton Bray which would place a minimum on the restrictions the Railroad Commission can put on oil wells. The bill provides that wells as deep as 2000 ft. may not be prorated below 10 barrels daily, 4000 ft. under 20 bbls., 6000 ft. under 25 bbls., 8000 under 30 bbls., and deeper wells, 35 bbls.

It was noted that in the commission proration order issued Friday it was specifically mentioned that the commission had granted greater allowables to deep wells than to shallow ones, and had also increased the allowables of fields operating under wide spacing rules.

Meanwhile the house oil and gas committee is studying a bill sent up by Rep. P. L. Crossley which would make failure to report dead wells a felony. No house action has been taken yet.

THE EDITOR'S PAGE

Readers Comments and Opinions will be much Appreciated by—WARREN C. PLATT, Editor and Publisher, Penton Building, Cleveland, O.

"Washington Problems" Will Trouble Jobbers from Now On

Oil jobbers' and many oil marketing problems are daily becoming more national in character, where for years they have been almost entirely within the state or limited area in which the average jobber operates.

Every once in a while NPN gets a protest, particularly from well inland, against "printing so much Washington news." We do not blame oil men for getting tired of hearing about and from Washington. We get tired of writing it ourselves but, unfortunately for all of us in business, the more government power is centralized at Washington the more we all must watch Washington in order properly to conduct our businesses, that is, if we can make head and tail out of the laws and rulings that emanate from the totalitarian-like bureaus at Washington.

So, in support of the need of every oil man for prompt, exact and fairly detailed Washington news, we offer in evidence the action the other week of the Missouri Independent Oil Jobbers' Association. That association, in its annual meeting, asked all jobbers' associations to join with it in clarifying rulings under the so-called Fair Labor Standards Act, also known as the Wage-Hour Law. The association especially wants an amendment limiting suits for back wages to not more than 2 years.

Oil jobbers, particularly in Illinois, have felt the bite of this Wage-Hour law. They have had their books checked and oversights, errors of judgment and misunderstandings of the law have been called to their attention. Many of the jobbers thought that the law did not apply to them either because of their smallness or because, according to all past court rulings, they were engaged in intrastate commerce only. But now these jobbers have found out that the policy of the present administration at Washington is to interpret all laws so far as possible against the employer and against "corporations" and in favor of the employe or "general public."

So now the Missouri Jobbers Association quite properly speaks out for clarification of the law and for united action, if possible, by all jobbers' organization.

The same week members of the Illinois Petroleum Marketers Association heard an attorney from the Wage-Hour Division explain his department's point of view of the application of the law to oil marketing, especially its effect on tank truck driver-salesmen.

Then, over in Kansas, the Kansas Oil Men's Association is backing a state bill to allow them 3% of gasoline taxes collected for the job of collecting them. This is an old question but it is becoming of greatly increasing importance with the growing load of taxes on the industry, to say nothing of the serious threat to add to that load through "war taxes." The more taxes the oil industry must collect from the consumer, the greater the collecting and bookkeeping job and even the heavier the financing of it becomes. Hence, most certainly the industry should be compensated for this increased operating expense.

Uniform action by all marketing organizations hence becomes desirable if not even necessary on this subject of just compensation for collecting taxes, especially as the threat of greater taxes from Washington grows.

Clarification of the Wage-Hour law and fair compensation for tax collecting are therefore not only national oil jobbing and marketing problems but they are also Washington problems. They are problems suitable for the consideration of the newly planned "Presidents Council of State Independent Oil Jobber Associations," which is now prepared to clear national questions between the various state jobber organizations, and, if agreement on any of them can be reached, then to present such agreement to whatever national authorities it should be necessary.

NPN has long undertaken to give oil men exact information on these national as well as state questions so that each may be able to arrive at his own opinion regarding them. NPN particularly has for years maintained its own News Bureau at Washington from which it not only supplies weekly information through NPN but also daily information by fast teletype to the readers of Platt's OILGRAM.

Whether we like it or not, every oil man's business is going to be more and more affected by what goes on at Washington and the oil man who wishes to cope with what comes from that growing center of federal authority, will have to set aside an increasing number of minutes and even hours every week, in order to fortify himself with the current information on which to try and operate his business with what success he may be able to achieve.

Reading "Washington news" will not be fun, we warrant, but, we can most emphatically assure every reader, that it is more and more necessary for the successful oil man.

Pew Attacks Blind Railroad Opposition

What may well be called the case of the oil industry against the railroads is clearly and vigorously presented by J. Howard Pew, president of Sun Oil Co. in his annual statement for 1940 just issued.

Mr. Pew strips a lot of nonsense and falsehoods from the railroad contentions of recent years. He makes two big points—one, that the very business that the railroads used to complain was losing money for them, their LCL business, is what the trucks have taken over and, two, that the railroads would be a whole lot better off if their officers spent their time and energy improving their services than just fighting competition.

Mr. Pew didn't throw it up to them but he might have, that the railroads have shown great improvement in their passenger business since they have accepted from outside manufacturers, new designs of cars and sleepers and since they have accepted from outside manufacturers, entirely new types of engines and since they have accepted even from the oil industry, Diesel engines.

Mr. Pew, in his annual statement, said:

"The problem of highway financing becomes the more exasperating when we consider that while motorists and the oil industry are scandalously over-taxed for highways, powerful influences persistently work to prevent these highways rendering their full service to the public. The railroads continue to fight against highway transportation, and persist in the charge that their financial difficulties are largely due to highway competition. Under all sorts of pretexts they press for legislation, Federal and state, to cripple or outlaw use of highways, particularly by commercial vehicles.

"Managerial energies that ought to be devoted to improving and popularizing railroad service are expended, at enormous cost, in this fight against trucks. Legislatures are cajoled into imposing senseless restrictions on sizes, weights and equipment of vehicles, limiting their rights on the road, and setting up state barriers against them. Figures are recklessly distorted to make the public believe that the special taxes of highway users do not meet the cost of the roads, and that, therefore, general tax funds subsidize the motorists' highways. This is a peculiarly mendacious misrepresentation, as was proved by Hon. Joseph B. Eastman, Federal Coordinator of Transportation, in his able and conclusive study of the subject. He demonstrated that the special taxes paid by commercial vehicles much more than compensate for their use of the roads.

"As a matter of fact, the railroads protested for many years that their less-than-carload traffic was handled at heavy loss. Yet that is the very traffic of which the trucks have in part relieved them. There have recently been some cheering evidences that the public is coming to realize the truth, and vigorous protests have been sounded against the railroad propaganda and against the erection of interstate barriers. The railroads, however, continue their campaign of misrepresentation; and lawmakers and public administrators continue strangely susceptible to their arguments. There is some reason to hope that this anti-highway crusade will lose a good deal of its effectiveness in the legislatures this winter because of the popular realization of how vitally important transportation is in the preparation of national defense."

Regulatory Measures Flood Legislatures

N. P. N. News Bureau

NEW YORK, March 3. — Regulatory measures were given the spotlight by state lawmakers during the past week, with tax proposals stepping slightly into the background. One state, Wyoming, completed its legislative session and adjourned sine die Feb. 22.

The distribution, sale and advertising of "gasoline, distillate, kerosine and lubricating oil" would be "regulated" in the state of Washington under S-334. A Georgia bill, H-560, would "govern" the drilling and operation of wells drilled for oil, gas or water, and would impose taxes on the oil and appropriate the funds arising therefrom.

A Kansas bill, proposed during the week, authorizes state corporation commission to prevent "unreasonable discriminations" in the production and sale of crude; a Texas bill would prohibit restrictions on the daily average production of oil and gas; a Massachusetts bill would provide "standards" for liquid petroleum products sold or offered for sales as gasoline; and a Maine bill would create a "fuel administrative board".

As the North Dakota bill establishing a state industrial alcohol plant and appropriating $25,000 was passed in the House, the Agriculture Committee in Washington submitted a bill authorizing the state college to investigate the possibilities of manufacturing ethyl alcohol at the state penitentiary.

Pennsylvania bill, H-523, would require posting of the price, "including rebates, commissions, discounts or consessions" granted to the public view, and prohibits sales at any price other than the one posted.

Midwest Co-op Hits Truck Capacity Law

Special to N. P. N.

MINNEAPOLIS, March 3.—A bill limiting gasoline trucks to 3000 gallons was attacked as "old age assistance for the railroads" at a hearing before the Minnesota house commercial transportation committee by E. F. Selvig, comptroller of the Midland Co-Operative Wholesale of Minneapolis.

Senator C. I. Oliver of Graveville, chairman of the Minnesota senate highway committee, called a public hearing March 4 on the bill.

Another bill introduced in the senate, if passed, will permit farmers to purchase gasoline for farm purposes, in lots of not less than 50 gals., without paying the state gasoline tax. The law now requires them to pay the tax which is later refunded.

A proposal to repeal the one mill road and bridge tax as part of the plan to raise gas taxes to 4c wound up in a bitter row in the house tax committee March 1.

Deferred Registration Studied by 9 States

NEW YORK, March 3.—Nine state legislatures are now considering bills which would postpone automobile registration by at least 60 days from every January 1, American Petroleum Industries Committee reports.

In Indiana, a bill has already been approved to change registration to March 1, bringing the total to 29 states and the District of Columbia.

States now considering deferred registration are: Arkansas, Colorado, Nevada, Georgia, Iowa, Vermont, Massachusetts, New York and Washington.

Bill Would Kill Texas Chain Tax

AUSTIN, March 1.—A bill to abolish the Texas chain store tax was on the House docket Feb. 28, introduced by Rep. Woodrow Bean of Sierra Blanca.

Under state supreme court ruling, service stations are classed as chains and are taxable up to $500 each annually where parent company exerts control over individual stations. Attorney General's department has suits ready to file against majors for back taxes running into hundreds of dollars.

DEATHS

James Edmund Pennybacker

James Edmund Pennybacker, 63, managing director for 22 years of Asphalt Institute of New York, died Feb. 25 at Delray Beach, Fla., after an illness of several months.

Born in Franklin, W. Va., he studied at the University there and was graduated from Georgetown University. He became chief economist of the U. S. Bureau of Public Roads in 1906 and was a framer of the first Federal Highways Aid Legislation. From 1910 to 1914 he was secretary of American Highway Assn. and was chief of management of the U. S. Bureau of Public Roads from 1914 to 1917. During the World War was secretary of the United States Highways Council. In 1919, Mr. Pennybacker was chairman of the Road Board of American Automobile Assn. He was the author of many magazine articles and government papers dealing with the development of the Farm-to-market road system.

Mr. Pennybacker was a member of the Cosmos Club of Washington and Engineers' Club of New York. He leaves his wife, Mrs. Louise Pennybacker, and 2 sisters.

* * *

Frederick T. Manley

Frederick T. Manley, 60, retired vice-president of The Texas Co. and co-developer of the Holmes-Manley cracking process, died Feb. 26 at Miami of a heart attack. Born at Shinglehouse, Penna., he started work at 9 years old as a news boy, then as a printer's devil. At the age of 12 he entered the oil business as a water carrier on the United Gas Co.'s pipeline and at 17 became a laborer at the Acme Oil Works.

Mr. Manley was president of International Pipe Line Co., International Refining Co., Texas Can Co., and Texaco Salt Products Co.; vice-president and director of Indian Refining Co. and director of Texaco Development Co. and of the National Bank of Commerce of Houston. He leaves his wife, Mrs. Ann Manley and a brother, A. E. Manley of Bayonne, N. J.

William A. Powell

William A. Powell, former secretary and treasurer of Tiona Petroleum Co., Philadelphia, died Feb. 20. Mr. Powell became associated with the oil business in 1916, at which time he joined Union Petroleum Co. as treasurer, continuing in that capacity until he joined Tiona in 1923. Due to poor health, he retired in 1940.

Eastern Fuel Oil Prices Reduced by Socony

NEW YORK, March 3.—Socony Vacuum Oil Co. announced a general reduction in its posted kerosine and Mobilheat (Nos. 2 and 3 fuel oils) prices, for all methods of delivery, throughout New England and Eastern New York State in the amount of 0.2c a gal. for kerosine, and 0.3c per gal. on Mobilheat.

Reductions in the states of Maine, New Hampshire, Massachusetts and Rhode Island were effected Feb. 28. In the remainder of the territory, including states of Vermont, Connecticut, and New York as far west as Tupper Lake, Fort Plain, Stamford and Sidney, the reductions were effected March 1. No reductions in prices for kerosine and Mobilheat were effective in New York City and environs, according to official announcement.

Revises Prices Of Texas Crude

N. P. N. News Bureau

TULSA, March 3.—Effective March 1, Stanolind Oil Purchasing Co. has revised its price schedule for Tomball, Tex. crude, and extended its posting to cover Satsuma, Tex. crude, according to a company announcement.

Stanolind's new schedule ranges from 95c for below 23 gravity oil up to $1.31 per bbl. for 40 and above, with 2c differential per degree of gravity for the intermediate grades. Previously, the company's Tomball schedule began with below 29 gravity oil at $1.07, and ranged up to $1.31 for 40 and above. The company's new schedule is the same as posted by Humble Oil & Refining Co. for Tomball crude.

Also on March 1, Stanolind made initial posting for Fairbanks, North Houston, and Rosslyn, Tex. crudes, with prices ranging from 81c for below 20 gravity oil up to $1.23 for 40 and above, the differential for intermediate grades being 2c per degree of gravity. Stanolind's schedule for these crudes is the same as Humble posts for Anahuac and Dickinson crudes.

HOUSTON, March 3.—The Texas Co. has posted a flat price of 70c per bbl., effective March 1, for oil in Cochran and Hookley Counties, Tex., according to a company announcement. This is an initial posting by Texaco.

On the same date, Texaco dropped Ward County from its West Texas crude schedule, and added Hillje pool to its Gulf Coast Texas schedule.

DALLAS, March 3. — Magnolia Petroleum Co. announced an initial posting of 65c a bbl. for Talco, Texas crude effective March 1.

Price is based on 100% tank tables, with corrections for temperature and impurities.

New price is same as that posted by Humble Oil & Refining Co. for Talco oil.

Jersey to Hike Gasoline In State of New Jersey

NEW YORK, March 1.—Effective March 4, Standard Oil Co. of New Jersey will increase its tank car and tank wagon prices for Esso and Esso Extra in the amount of 0.3c per gal. and its minimum retail price 0.5c a gal. in the state of New Jersey only, according to a company announcement. Tank car price in New Jersey will become 6.8c, 100% dealer 7.3c and minimum retail 10.9c. The increase is due in large part to the rise in gasoline prices at the Gulf, a company official stated.

Look to Universal

A 25% expansion in the petroleum industry's capacity to produce blending agents for aviation gasoline is being sought by defense officials. Late in 1941 or sometime in 1942, demands for 100 octane aviation gasoline are expected to exceed the present capacity of the industry to manufacture the necessary blending agents—WALL STREET JOURNAL, Jan. 27, 1941

Proved processes are ready to make plenty of "the necessary blending agents" for 100 octane aviation gasoline and other defense products, no matter how high the emergency demand, and they are available to all refiners through Universal

Perhaps those processes don't fit in with your particular operation but certainly you can use

Dubbscracking

U. O. P. catalytic polymerization

U. O. P. inhibitor

And the friendly and effective help of Universal refining specialists

They are always at your service, too—through Universal

If you are not making full use of them you ought to be

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

Indiana Marketers at Spring Meeting May Get 1941 Merchandising Program

N. P. N. News Bureau

CLEVELAND, March 3.—Program of the Spring Convention of the Indiana Independent Petroleum Assn. at the Severin Hotel, March 11-13 was arranged to help marketers do a better job of selling during 1941, it was announced at Indianapolis this past week.

Board of directors of the group will also hold a special meeting to give consideration to carrying out this theme of "Preparedness in Selling" beyond the convention, with possible training in merchandising, and salesmanship for the men on the driveways. If a workable plan is approved, it will be submitted to marketers at the convention.

Rev. John L. Davis, of New York, will speak at the afternoon session March 12. His subject will be the "Psychology of Success". On the same program will be Ray C. Ellis, Detroit, salesmanager, Delco Radio Division, General Motors Corp., who appears through arrangement with National Assn. of Manufacturers.

At either the March 12 or 13 session, Russel S. Williams, Indianapolis, Gaseteria, Inc., and chairman of the association's legislative committee will report on activities of the Indiana legislation during the current session.

G. W. Sulley, Dayton, O., National Cash Register Co., will speak on the "Keynote for Profitable Retailing" at the March 13 session. On the same program will be Russell S. Moore, Columbus, O., Midland Mutual Life Insurance Co., whose subject will be "The Proper Mental Attitude".

Thomas D. O'Malley, Chicago, regional director of the Wage and Hour Division of the U. S. Department of Labor will speak on the application of the Wage-Hour law to the oil industry. Following Mr. O'Malley's talk, a "Question and Answer" period will be held during which marketers may ask questions on any phase of the law confusing to them.

Entertainment will follow the annual banquet the evening of March 13.

Effective Oil Conservation Program Urged by I.P.A.A.'s Counsel Brown

N. P. N. News Bureau

WASHINGTON, March 1.—There now are no less than 123 legislative proposals before Congress which affect the oil industry, Russell B. Brown, general counsel, Independent Petroleum Assn. of America, told a group of Illinois, Indiana and Kentucky oil men and others interested in the oil industry, in a speech delivered this week in Evansville, Ind.

Mr. Brown, who devoted much of his address to the subject of federal oil control, declared best defense against such control is "for the industry and the states concerned with petroleum production to occupy the field of conservation so completely and so satisfactorily as to make unnecessary any elaborate scheme of federal control."

Saying some of the measures now pending before Congress would have a destructive effect on the welfare of the oil industry, Mr. Brown stated such legislation includes inequitable and harmful taxes, movements to subject separate divisions of the industry to bureaucratic control, and efforts toward federal ownership of all tidelands.

Bills Before Congress

One bill presented to the House would require Interstate Commerce Commission certificates of convenience and necessity for construction and extension of interstate pipelines, the speaker said, while others compel blending of alcohol with motor fuel. Also before Congress is the anti-pollution bill which last session, according to Mr. Brown, was amended so drastically that a new oil well could not be drilled without special permission from a federal agency in Washington, as well as "a sales tax on fuel oil in order to promote the welfare of the coal industry."

Referring to charges made "by some in high places" that the oil industry is either unable or unwilling to discipline itself and is wasting an irreplaceable resource vital to the nation, Mr. Brown asserted the industry can nullify this criticism by showing what it has done, and can do, through co-operation with state agencies, to discipline itself and reduce waste to a minimum by balancing oil supply with demand.

"It is recognized," Mr. Brown said, "that if the industry and the states do not formulate and effectuate some program, there will be formulated and effected for them a program by those outside of the industry and more concerned with the national government itself.

"There is no excuse in our being blind to the fact that this agitation (for federal oil control) is general," Brown said, adding, "it has gone so far as to receive the endorsement of the president of the United States and his recommendation that something of this type be done."

Mr. Brown, who estimated Illinois, which was one of the original signatories of the Interstate Oil Compact, has lost $100,000,000 through lower prices resulting from uncontrolled production, said the Compact offers a medium for coordination of state conservation programs so as to make them effective for all states.

Gov. Ratner Guesses Ickes was 'Blasting'

TULSA, March 1.—At one time during Governor Ratner's speech before the accountants a high wind blew open one of the big windows in the meeting room. The governor paused for a minute, tugged at his opened collar and conjectured that Mr. Ickes must be blasting forth over in that direction. He had just finished speaking of a certain group in this country "obsessed by the theory of centralized government."

Oil Men in Mid-Continent Hear Warning Not to Surrender Powers to Washington

N. P. N. News Bureau

TULSA, March 1.—"Let's meet every real emergency with whatever action is necessary, but let's not needlessly surrender to the federal government those powers which belong to the states and which can be used most effectively by the states for the good of the people."

This was the challenge of Gov. Payne Ratner of Kansas to oilmen at the Executives Night program of the Petroleum Accountants Society of Oklahoma here this week. It was the challenge of the young states-rights advocate to stem the "flood-like . . . movement to force us to surrender our rights of self-government and to permit the concentration and centralization of control under the federal government."

Illustrating his contention that federal control was being advocated in the guise of "emergency," the governor told of a friend's trip to Washington.

"And are we now on Constitution Avenue?" he asked his host.

"Yes and no," was the reply, "this once was called Constitution Avenue, but it's known as Emergency Street."

The speaker outlined the fight that led to the defeat in 1940 of the Cole bill, but added that the "war goes apace—today the federal effort to take over the entire petroleum structure, from leases to tankers, has been redoubled with pleas that the 'national defense emergency exacts' it."

It makes no difference, he said, that neither army nor navy authorities have indicated government control of oil as essential in this major crisis, that the National Defense Advisory Commission estimates war-time needs will not increase over-all demand more than 20%, that government figures show the U. S. had its greatest oil producing year in 1940, it makes no difference that the U. S. has billions of barrels of proven oil reserves, that state conservation programs have made this condition possible, that refining capacity is adequate for war and peace time needs, that under private control the U. S. oil industry made it possible for the Allies in the last world war to "float to victory on a sea of oil," that private industry has combined the results of chemistry and engineering to work miracles in petroleum practices, increased value of petroleum and reduced its costs, at the same time increasing salaries and reducing working hours of the industry.

"No, it makes no difference," he continued, "because a certain group in this country, obsessed by the theory of centralized government, which sees its blessings and none of its blight, would bind the sinews of this petroleum giant with bureaucratic tape and tame him with the rod of federal control."

"Yet when government uses all of its vast authority to make business and industry submissive to its will and guidance, private initiative is dashed and the well springs of progress cease to flow," the governor claimed.

"Eternal vigilance is the price of liberty today as much as it was in 1776," he said in advocating a more intensive interest by the people in public affairs.

In speaking of the Interstate Oil Compact, the Kansas governor who announced that he had just signed authorization for extension of his state's membership in the pact, said "we think the record of the Oil Compact to which the Mid-Continent oil states belong, proves that such federal domination is unnecessary."

WITH THE ASSOCIATIONS

Recycling Program Features API Meet

SHREVEPORT, La., March 3.—A program designed to acquaint its membership with recycling — the newcomer to the petroleum industry — featured the first day session of the production division of the southwestern section of the American Petroleum Institute here last week.

Background and history of recycling was furnished by B. B. Boatright, Houston, in his paper "Practical Economics of Cycling." He discussed the development of recycling to the point where Texas's 31 plants now process 1,250,000 cubic feet of gas daily to recover approximately 25,000 bbls. of condensate daily. Considering construction of new plants, Mr. Boatright indicated total processing capacity in 1941 might be double the 1940 figure.

"Due to the relatively newness of cycling operations some financing agents," he continued, "have been hesitant to participate because of the lack of experience. However, a good and potentially profitable enterprise, generally speaking can be readily financed."

Other Papers Presented

With this paper as background, discussions pertaining to more detailed phases of recycling were presented by other authorities. The "Testing of Gas to Determine Feasibility of a Recycling Plant" was discussed by E. O. Buck, Houston consulting engineer. Humble's G. M. McCarthy and William Hurst of Houston dealt with the "Application of Electrical Models in the Study of Recycling Operations in Gas Distillate Fields."

Another subject at the first day session was the "Removal of Paraffin by Electrical Heating from Producing Wells in the Texas Panhandle" by Benton Turner of Los Angeles and Charles R. Rider of Dallas.

Speaking of oil supplies in the European struggle, W. B. Heroy, Houston, Pilgrim Exploration Co., estimated the Axis powers now control some 300,000 bbls. of oil production daily, which he said was well above the pre-war consumption of Germany and Italy. But Italy has only 4000 bbls. of this total and this may account for the inactivity of the Italian naval and air forces, he said.

While occupation of Roumania by Germany would seem to solve the Axis oil problems, Mr. Heroy explained that serious obstacles must be overcome in transporting the oil to industrial centers in Germany and to the war front. After discussing Germany's transportation facilities from Roumania, he described as a bottleneck in river transportation that point on the Danube where it breaks through the Carpathian mountains. To bring oil to the Danube above this point, he said Roumania is constructing a pipeline from Ploesti west for a distance of 300 miles.

Featured speakers at the closing session of the meeting were Major B. A. Hardey, member of the Louisiana minerals commission and George A. Hill, Jr., Houston, Houston Oil Co. of Texas.

North Texas Group Holds Annual Meet

WICHITA FALLS, Tex., March 3.—At least half of Texas' Legislature was on hand here last Saturday to attend the annual meeting of the North Texas Oil & Gas Assn. and hear Homer Leonard, speaker of the Texas House, and Lt. Governor Coke Stevenson of Texas speak to the oilmen.

No discussion of oil problems or oil legislation was slated for the formal program, which was given over to the installation of newly-elected officers.

New officers for the coming year honored at the meeting were C. J. Tucker, Tucker Oil Co., president; D. G. Gray, executive vice-president; J. T. Harrell, first vice-president and Fred Sehmann, secretary-treasurer of Petroleum Producers Co., second vice-president. All are residents of this city.

'Success Formula' Offered Independent Iowa Marketers

By N.P.N. Staff Writer

DES MOINES, Feb. 28.—A success formula for an independent oil marketer was presented at annual convention of Iowa Independent Oil Jobbers Assn. here Feb. 26-28 by D. Oty Groce, St. Charles, Mo., Groce Independent Oil Co., and former president of Missouri Independent Oil Jobbers Assn. In his talk, "The Oil Jobber's Problems," Mr. Groce, speaking Feb. 27, outlined his formula as:

Be independent, run your own business.

Get all the advantages you can from your supplier.

Inform yourself and manage well.

Get whatever association and governmental assistance may be had.

Do a good job with what you have.

Mr. Groce discussed the following management problems which the marketer can solve, or at least greatly improve, through his own personal efforts:

RELATIONS WITH SUPPLIERS. In dealing with your supplier, use the same qualities of salesmanship that you use with your own customers, he said. You have a knowledge of local marketing conditions, and a standing as a business man in your community which you can use to better advantage in many cases.

Don't assume the supplier's representative knows more about oil marketing than you do, he told his audience; take the opposite position. "The local oil marketer has much to offer the supplier on his side of the bargain," he said.

Mr. Groce told the Iowa marketers not to make their approach to their supplier only on the terms of a gasoline buying arrangement. "It is very difficult for the supplier to make a different price to you than to all other marketers in your class," he said, "but it is in the 'extras' that shrewd trading will often give you some advantages."

"Be careful about long contracts with a supplier," he said, "I prefer to operate without a contract and have for years. You may be in a position where you have to have a contract, but always have a way out. Have a clause, wherein, if you pay them off, your contract would be released. If they demand a contract, make it for as short a time as possible, certainly not more than one year."

HIRING HELP. "If you hire one or more persons, you have the problem of selecting the proper person for the job and the problem of inspiring these individuals to do the job the way you want it done. You have the choice of hiring expert help, or taking raw recruits and training them.

"In a small business, where the jobber can give his entire time to managing, the latter course seems the most practical to me."

KNOW REAL ESTATE. Become well posted on the real estate market in the territory where you operate, Mr. Groce told the Iowa marketers, saying:

"You must certainly be a judge of real estate; because you will likely have to be a real estate owner, you will have to take leases on real estate, you will have to take mortgages on real estate. In fact, you will probably have to make every deal it is possible to make with real estate. Problems of finance, insurance, taxes, rents, tenants, etc. go with owning real estate."

KEEP UP YOUR EQUIPMENT. Most local oil marketers cannot handle this problem as the major companies do with the stations they own and they should not try to use the same basis, said Mr. Groce. Keep your equipment well painted and in good working condition and you will not have so many requests for replacement, he added.

"You will invariably find the

dealer who is doing the poorest job of selling your products wants the best equipment. Always have in mind one of your good dealers who does not have the latest and best equipment, to offset his argument."

DO YOU BUY, OR JUST ORDER. "Do you buy and sell, or do you order and deliver? In order to sell, you must sell right and, in order to sell right, you must buy right.

"I believe the average jobber should do his own buying to a large extent, because there are so many ways in which he can save through buying. Certainly, he will have to depend on someone else with a large portion of the selling, but he must train these others to sell. I think that, by a little harder work on the part of the salesman, better prices can be had and more profits obtained.

"The crux of your profit possibilities is in your buying and selling."

DO CUSTOMERS RUN YOUR BUSINESS? "Customers, too, need to be trained," said Mr. Groce. "If you sell your customers the quantities they want, you are driving lots of miles per gallon of delivery. I believe some customers would take deliveries in half-gallon syrup buckets, if you would give it to them.

"I do not believe you can have hard and fast rules on these matters, but consistent effort will cause your customers to receive merchandise in larger volumes, and consistent training will make your collections easier.

"You will probably have to receive a few calls from a new dealer, until you have time to sell him on the idea you cannot receive collect calls. This training of customers is a money saver, however."

OFFICE DETAILS. "Many jobbers succeed in every field, except office details. Credits and collections have caused more jobbers to go out of business than any other one item. Learn one thing and learn it quick. Either collect your money, or don't give credit. There isn't sufficient margin to permit credit losses and stay in business.

"Insofar as you are concerned as the head of your business, this is one problem to which you must give your personal attention. Other details, such as reports, traces, etc. have to be handled and the proper agencies will see they are taken care of. But your credits will go on as long as you have money to furnish merchandise, if you do not give them personal attention."

SALES PROMOTION. "Are you doing anything about 'plussing up' your business? Every jobber, no matter how small, must have a sales promotion program. In most cases, he will have to run it himself.

"Are you going to promote more volume, or more profits? Are you going to promote more stations, or more profits from the stations you have? It is an easy matter to put on a drive and get more stations; but a sound sales promotion program will be built on the theory of more profits for the business.

"Contests can be used profitably to build up dealers. Certainly, the awards in the contest should be limited to dealers. Premiums to customers in my opinion, are not sound sales promotion.

"Every contest should contain some element that will bring about better service to the customer by the dealer. Sales promotion programs should dress up the stations and their personnel. One of the greatest possibilities in sales promotion is in training the personnel.

"Have a traveling library of good magazine articles and books and pass them on to your dealers, to stimulate them.

"As head of your company, continue to read, attend association meetings, and do all the things that will keep you on your toes," Mr. Groce concluded his talk. "Take your business as it is, whether you have little stations, or big stations; whether you have good equipment or poor equipment; whether you have the best product or the poorest product. TAKE WHAT YOU HAVE AND MAKE IT GO. IT CAN BE DONE."

Harms Re-elected

All officers of the association, as well as 5 directors were re-elected. Five new directors were chosen.

Leland L. Harms, Allison, of Harms Oil Co., was re-elected president. Re-elected vice-president was Gerhard Goplerud, Osage, of Goplerud Oil Co. Treasurer again is F. H. Hatch, Edgewood, of Jones County Oil Co. A. C. Gienapp, Manchester, continues as secretary of the association.

The directors will consider giving Mr. Gienapp a field secretary, to take some of the detail work off his shoulders.

Board members re-elected were: A. L. Sharbondy, Sharbondy Oil Co., Sibley; E. H. Rehben, Tipton Oil Co., Tipton; J. A. Johnston, Johnston Oil Co., Eldora; J. G. Phippen, Russell Oil Co., Russell and E. F. McDonough, The Town Pump, Fort Madison.

New directors elected were: Ernest D. Anliker, who operates under that name, at West Bend; E. F. Bock, Bock Oil Co., Garner, R. O. Davis, Davis Oil Co., Ladora; S. Rizk, Interstate Oil Co., Sioux City; D. C. Davison, Clarinda Oil Co., Clarinda and Frank Bostwick, Washington Oil Co., Washington.

Jobbers Urge 2 Year Limit On Wage-Hour Liability

The association passed a resolution urging a statutory limit of 2 years on claims for back wages and damages under the Wage-Hour Law. Resolution will be brought to the attention of senators and representatives from Iowa in Washington. It will also be brought to the attention of other state oil marketing associations holding their annual conventions in coming weeks. Northwest Petroleum Assn. and Missouri Oil Jobbers Assn. at recent conventions also urged the 2-year limit on liabilities under the federal Wage-Hour Law.

At present, there is no limit on the period of time, from the date the law became effective, for which employes can put in claims for back pay and damages.

Threaten Financial Positions

Iowa marketers believe that, in view of the present confusion over interpretations of the law in the courts, and the difference of opinion among government officers administering the law, as to what constitutes violations, that it is most unfair for the government to consider claims going back more than 2 years. They say that it would be possible for claims for back pay and damages brought against small oil marketing concerns to be large enough to seriously threaten the financial positions of these companies.

The marketers say there are many cases of oil company employes in the so-called "twilight zone," where the applicability of the Wage-Hour law has not been defined. In the light of later interpretations, without a statutory limit, it may be possible for employes in this class to put in claims for large sums.

A similar resolution, to limit the period covered by back pay and damage claims to 2 years, was adopted by the American Federation of Labor, at its annual convention in Miami, Fla., earlier in February.

Cut Agents Commissions

Other resolutions recommend:

1—When wholesale distributors' margins on gasoline business, at certain specific points, are reduced below normal for the state by price disturbances, they want the commission agents for the large oil companies to stand part of the difference between the local existing margin and the normal margin. Independents feel that local price wars are often started, and aggravated, by the majors' commission agents reducing their tank wagon prices, to meet actual or reported, prices of competitors; and that this would not happen in so many cases, if the commission agent, like the independent, had to stand part of the loss of margin.

Resolution Opposes Alcohol Motor Fuel

2—They oppose any state or federal legislation intended to force blending of alcohol with gasoline for motor fuel—until it is established that such blends can be produced and sold at as low cost as present motor fuels.

Iowa marketers believe that, when alcohol is found to be practicable for motor fuel, it won't need special legislation to nurse along its development.

To Continue Rate Fight

3—Equalization of transportation costs among the various methods of bringing gasoline and other products into Iowa, is another plank in the platform of the Iowa marketers' association. To this end they will continue their efforts to secure reductions in railroad rates, from their sources of supply, in order to put the independents on a more nearly equal footing with the gasoline pipeline and river barge shippers.

4—They oppose the Cole oil regulatory bill now in Congress, as a measure which will have the effect of limiting the opportunities for individual initiative and enterprise in marketing, as well as in other branches of the industry.

Oppose Fuel Tax

5—They oppose any tax on fuel oil, as handicapping its development in competition with other forms of fuel, to the detriment of consumers. The public should not be penalized in its desire to use a convenience fuel, say the Iowa marketers.

Iowa association is also on record as opposing any increases in gasoline and lubricating oil taxes.

6—It also recommends the re-

peal of state kerosine inspection law. Amount of the inspection fee is 3c a bbl. No need for an inspection of kerosine now exists, the marketers say, and this obsolete statute should be removed.

7—It opposes a bill in the Iowa legislature exempting local political subdivisions from filing refund claims for gasoline taxes.

8—Iowa association seeks to protect the state gasoline tax funds from diversion to other uses than highway improvement, through a constitutional amendment. There is no diversion of tax funds now, but marketers feel the constitutional amendment should be adopted as a permanent safeguard.

Other resolutions adopted at the convention of the Iowa oil marketers included:

Urging the price reporting publications to publish in their market reports only the prices at which gasoline is actually sold, not the prices quoted by refiners as those at which they will sell.

No increase be made in the Iowa gasoline tax.

Recommending reducing the annual gasoline pump license fee from $3 to $1.50.

Chairman of the resolutions committee was John W. Schultz, Consumers Petroleum Co., Davenport.

Tractors Open New Market

Servicing the increasing number of high speed, automotive type tractors on farms is opening up new markets for oil companies in agricultural sections, A. E. Vallier, Detroit, engineer for Ethyl Gasoline Corp., told Iowa jobbers. Much the same servicing is required for the tractors as for cars and trucks. The principal difference is, said Mr. Vallier, that the oil companies will have to develop means for doing the servicing on the farms, for the farmer can't take his tractor to the oil company's service station.

Not only do these tractors use regular, or third grade, gasoline, and the same type motor oils that trucks and cars use, said this speaker, but they also need chassis lubrication, change of crankcase and differential lubricants, spark plugs, oil filters and other items oil companies can sell them.

Warns of Defense Tax Burden

"If the oil man doesn't become tax conscious, taxes will shortly be in the way to knocking him unconscious," epigramized G. C. Lloyd, secretary of the Iowa Petroleum Industries Committee, in introducing his talk before the Iowa marketers' convention. He discussed the new tax problems, both state and national, which the defense program will place on the oil industry. He said:

"It is inevitable that huge new tax demands will arise. No one wishes to escape his fair share of the national defense burden. However, in any period of rapid expansion of taxation, unfair, discriminatory and excessive taxes are likely to be enacted, unless every citizen is vigilant and informed.

"From past experience we know that petroleum products are among the easiest and most convenient to tax, which has resulted in the petroleum industry carrying more than its share of the tax burden, measured by other industries.

"With general increases in taxation in prospect, men in the oil business must be prepared for ingenious attempts of all descriptions to shove unfair tax burdens onto their industry."

Other speakers included:

S. M. McKee, Nourse Oil Co., on "Lubrication and Engine Development."

A. J. Smith, Calumet Refining Co., on "Oil and the 'Modern Oil' ".

George L. Gray, field representative, National Highway Users Conference, who spoke on the relationship of the gasoline tax to highway users.

D. Wesley Barns, Des Moines insurance man, who talked on liability insurance problems in oil marketing.

Tennessee Legislative Session Closes After Approving 'Favorable' Oil Bills

N. P. N. News Bureau

NEW YORK, March 3.—Legislation adversely affecting the oil industry was generally received without enthusiasm by the 72nd General Assembly of the Tennessee legislature, which adjourned last month after completing the shortest regular session in the history of the state. The few "oily" bills which passed and were approved were, for the most part, of a favorable nature, but the session was more marked by the number of unfavorable bills which failed of enactment.

Taxes on "oil depots" were substantially reduced under a newly enacted law. From a graduated scale of $50 for 31 gals. to $600 for over 8,000,000 gals. this law fixes the oil depot tax on a graduated scale of $50 to $700 for all depots storing over 6,000,000 gals. Another successful bill, exempts from inspection fees the storage or movement of petroleum products at or between refineries within Tennessee when not for the purpose of sale.

A 7c per gal. tax was slapped on diesel fuel used on the highways. However this tax, is a "use" tax and is paid directly by the user to the state tax department, the money to be allocated in the same manner as the gasoline tax revenues. A proposed ½c per gal. "privilege" tax on all liquid petroleum products stored in river terminals for sale or distribution within the state died in committee.

Truck Limit Hiked

Permissible gross truck weight was upped from 24,000 to 30,000 lbs., not to exceed 16,000 lbs. per axle, for both private and common carriers. A bitterly-fought amendment to set a 28,000-lb. maximum was proposed in the House and the bill in its final form was passed by only a narrow margin in both houses.

Senate Bill 117, and HB-179, companion measures which were approved, writes into the statutes, regulations governing the inspection of kerosine, and extends the inspection law to include any petroleum substance used as a substitute.

Among the bills which failed of enactment was one to prohibit common carrier trucks from operating on the highways from noon on Saturday to midnight on Sunday, and another which authorized cities to tax freight trucks for the use of the streets. Two bills which were killed would have allowed a 1% deduction of the gasoline tax by distributors to cover costs of collection.

Iowa Association Officers Re-elected

Re-elected officers of Iowa Independent Petroleum Assn. are, left to right, A. C. Gienapp, secretary; Leland L. Harms, president; and Gerhard Goplerud, vice-president. F. H. Hatch, treasurer, was also re-elected

G.C.R.A. Gasoline Stocks Increase 94,617 BBls.

HOUSTON, March 3.—Gasoline stocks of Gulf Coast Refiners Assn. membership increased 94,617 bbls. the first half of February as crude runs were stepped up 9748 bbls. daily average, according to G.C.R.A. report.

Of total stocks, 502,070 bbls. was aviation fuel, up 28,466 bbls.; 1,483,048 was motor fuel, up 67,468; and 53,647 bbls. was naphtha, down 1317 bbls.

Kerosine stocks were reduced, but stocks of all other products were higher on Feb. 15 than on Feb. 1, the report revealed.

No Decision Reached On Gas Tax Payments

N. P. N. News Bureau

WASHINGTON, Feb. 28.—Department of Justice reports no decision has been reached as yet by Solicitor General Biddle's special committee, which has been working for some time on the "important question" of whether states can apply their gasoline taxes to contractors holding cost-plus-fixed-fee national defense contracts.

Committee, which consists of Justice Department personnel, was appointed by solicitor general with instructions to develop a statement of federal government policy toward recent efforts of various states to apply their gasoline taxes to cost-plus contractors.

1c Processing Tax Fought by Refiners In Lone Star State

(*Continued from page* 11)

Texas refineries could not compete with other refineries if the 1c tax is put on them. He said they "might be able" to pass on the tax to the 15% of gasoline used by Texans, but could not do so on exported gasoline. Rep. C. E. Nicholson of Port Neches, a refinery executive, rose to disagree with Blalock, stating that the tax could not be passed on.

Blalock said the only way Texas refineries could survive would be by reducing the price paid for Texas crude, and in the case of the 1c levy, Texas crude would have to be cut 19c a bbl.

M. S. McCorquodale, for the Gulf Coast Refiners' Assn. related the intense competition faced by small refineries and said they are having a hard time staying in business as it is.

Effect of Tax

Other witnesses told the legislators that Texas now refines nearly half the Louisiana production because of a similar tax imposed by that state, and warned that many Texas refineries would move out of Texas if the tax passes.

A group of Port Arthur labor men, including both building trades and the men employed in the huge refineries there, joined in protest to the export principle of taxation.

Another bill, a production tax on oil based on a rate of 0.25c per gal. of gasoline potential, offered by Rep. L. W. Harris of Whitney, was differentiated from the processing tax on refineries, and speakers said they had not yet had a chance to study the bill. A third bill, introduced by McCann and Senterfitt, is similar to Harris processing plan.

NPN's Log
On Oil Legislation

Oil legislative information, summarized below, is based on reports deemed reliable although NATIONAL PETROLEUM NEWS assumes no responsibility for the accuracy or completeness of this information.

CONGRESS

House

HR-3513, Crosser, Ohio.
Requires Interstate Commerce Commission certificate of public necessity and convenience before interstate pipelines can be built or extended. To Interstate and Foreign Commerce Committee.

HR-3617, Taylor, Colorado.
Includes $2,190,000 for Navy underground storage of aviation gasoline and oil, and funds for aviation gasoline and oil storage at some 20 Army air fields. Reported to House.

STATE

Georgia

H-560, Sills, et al
Governs drilling and operation of wells drilled for oil, gas or water in state; to impose taxes on oil and appropriates funds arising therefrom. To State Republics Committee.

Idaho

S-159, Highways Committee
Amends "unfair sales" act to permit resident wholesalers and jobbers to compete with those from out-of-state. To State Affairs Committee.

H-304, Ways and Means Committee
Creates Department of motor fuels inspection in Department of Public Works.

Iowa

S-387, Faul
Provides a 14-ton maximum weight for motor vehicles.

S-402, Baldwin
Creates a state reciprocity commission.

S-418, Evans
Provides for weighing and inspection of motor vehicles and trailers.

H-403, Roads and Highways Committee
Provides for inspection of motor vehicles. To Calendar.

SJR-9, Benson
Amends constitution to exempt gasoline tax on airplane fuel from prohibition against diversion of highway funds.

Kansas

S-269, Assessments and Taxation Committee
Taxes motor fuels 3c per gal. for highway construction. Provides for monthly reports, licensing and posting of bonds; provides for records of all fuel purchased, sold, or delivered by all persons engaged in transporting fuel.

S-274, Dale
Authorizes state corporation commission to prevent "unreasonable discrimination" in production and sale of crude.

Maine

H-1619, Belanger
Requires meters on all oil delivery trucks. To Judiciary Committee.

H-1525, Sylvia
Creates a "fuel administration board." To Judiciary Committee.

Massachusetts

H-809, Sullivan
Provides standards for gasoline. To Mercantile Affairs Committee.

Michigan

H-210, Murphy
Requires directional signal system for trailers and semi-trailers. To Transportation Committee.

H-219, Knox and Decker
Requires collection of weight tax in February only and for proration of tax after April 1 on a monthly basis. To Roads and Bridges Committee.

North Carolina

H-388, Abernathey
Changes elected measures of gasoline tax. To Finance Committee.

H-445, Stone
Enlarges definition of motor fuels and provides use tax on vehicles not paying motor fuel tax. To Roads Committee.

Oregon

SJR-11, Roads Committee
Anti-diversion constitutional amendment. To Roads Committee.

Pennsylvania

S-235, Dent
Provides 1½c per gal. instead of ½c be paid into liquid fuels fund. To Highways Committee.

H-523, Heatherington, et al
Requires retailers of gasoline to post price to public view, including rebates, commissions, discounts or concessions granted, and prohibits sale of gasoline at price other than posted one.

South Dakota

S-363, Highways Committee.
Empowers state treasurer to stop and inspect size of trucks transporting motor fuel imported into state.

Texas

H-470, Harris, et al
Provides for occupational tax upon production of oil as measured in gasoline potential thereof. To Revenue and Taxation Committee.

H-463, Sharpe, et al
Provides for privilege tax on every person, firm, association, or corporation engaged in gathering gasoline procured in Texas. To Revenue and Taxation Committee.

S-26, Moore
Extends expiration date of the oil and gas conservation law until September 1, 1943. To Civil Jurisprudence Committee.

H-490, Bray
Prohibits restrictions on the daily average production of oil and gas. To Mining Committee.

Vermont

H-183, Kirby
Requires tank trucks to install sales ticket devices. To Commerce Labor Committee.

H-184, Manhan
Provides regulations for trucks transporting inflammable liquids To Highway Traffic Committee.

H-205, Jarvis
Forbids operation of motor carriers over 6000 lbs. on highways on Sundays and holidays, except when carrying perishables or newspapers. To Highway Traffic Committee.

Washington

S-312, Keller
Provides for excise tax on use of fuel other than gasoline for motor vehicles. To Roads, Bridges Committee.

S-334, Rosellini
Regulates distribution, sale and advertising of gasoline, distillate kerosine and lubricating oil. To Roads and Bridges Committee.

H-540, Agriculture Committee
Authorizes state college to investigate possibilities of manufacturing ethyl alcohol at state penitentiary. To second reading.

West Virginia

H-296, Mattews
Same as S-137. Regulates working hours and conditions for intrastate motor carrier employes. To Judiciary Committee.

CHANGED STATUS

Arkansas

H-297, Budget Commission
Appropriations for operation and maintenance of gas and oil commission for period ending June 30, 1943. Passed House.

Delaware

H-16, Richards
Provides for 22,000-lb. gross weight limit on trailers. Passed House.

Indiana

H-386, Malone and Henley
Exempts bulk stations from state store license tax if 60% or more of business is in petroleum products. Passed House.

H-326, Abshier and Batman
Amends truck act to set up new rate making rules; fixes rates for each class of carrier; revises control of regulations to conform to national regulations. Passed House

H-221, Copeland, et al
Limits height of motor vehicles used on highways to 13½ feet; limits length to 36 feet and combined length to 60 feet. Killed in House.

H-333, Willis
Amends oil inspection law to provide for appointment of chief inspector and other employes by governor, secretary of state and auditor of state. Passed over governor's veto by both House and Senate.

Maine

H-312, Farwell
Reduces registration fees for motor trucks to $30 for 2-2½ ton trucks; $35 for 2½-3 ton trucks. Passed House.

Minnesota

H-247, Peterson, P.J.E.
Memorializing Congress to defeat the proposed 2c per gal. excise tax on fuel oil. Passed House.

H-374, Covert, et al
Same as S-287. Raises gasoline tax to 4c per gal., effective 20 days after approval. Passed House.

North Dakota

S-40, Tax Committee
Re-enacts 2% retail sales tax for next biennium. Passed House.

H-311, Moe
Provides state be entitled to 50% of any oil, gas or minerals from lands acquired by the state. Tabled.

H-102, Levin
Establishes a state industrial alcohol plant and appropriates $25,000. Passed House.

S-50, Tax Commission
Authorizes continuance of special 1c gasoline tax. Approved.

H-97, Aker and Welder
Changes from 50c to 25c the cost of tax exempt purchase license, and changes bulk station license from $2 to $5. Indefinitely postponed in House.

South Dakota

S-98, Knight
Permits tax-free deliveries of gasoline from refinery, boat, barge, or pipeline terminal to licensed dealers. Approved.

H-146, Anderson
Imposes 4c per gal. tax on fuel oil used on highways and not included under gasoline tax law. Passed Senate.

Utah

S-18, Farr
Imposes 4c excise tax on motor fuels. Approved.

West Virginia

HJR-6, Meredith, et al
Anti-diversion constitutional amendment. Passed House.

H-211, Ballard
Continues special 1c gasoline tax Passed Senate.

OIL TRANSPORTATION

House Committee in Georgia Approves 2 Pipeline Bills

Special to N. P. N.

ATLANTA, March 1.—After a stormy three-hour open hearing here last week, special House committee of the Georgia legislature favorably reported two bills to grant pipelines in Georgia right of eminent domain, and permit them to traverse public property.

A full house turned out for the open hearings on the controversial subject of whether the legislature should allow the Southeastern Pipe Line Co. to complete its Florida-to-Tennessee gasoline pipeline through Georgia.

The pipeline has been completed and is in operation between Port St. Joe, Fla. and a point near Bainbridge, Ga. It is being held up in Georgia by what pipeline officials term a "technicality" of the law and they now seek enabling legislation to hurdle this "technical barrier."

Presentation of arguments for and against the two bills brought on a heated debate.

Vital to National Defense

Proponents of the bills, opened the argument with statement that the Southeastern pipeline was vital to national defense and that this contention was substantiated by correspondence between President Roosevelt and Chairman Lea of the House Interstate and Foreign Commerce Committee.

Military authorities are vitally interested in completion of the line because the additional transportation facility would release tankers for use in the national defense program, it was contended. Continuing along this line Southeastern's Attorney Marion Smith said 75 tankers would be released to national defense needs within 30 days after necessary authority is given for completion of the line.

If the Georgia Legislature does not shoulder its responsibility and permit construction of the line through Georgia, it was pointed out that Congress may be forced to take necessary steps to authorize its extension.

"This should be a challenge to the patriotism of every member of the Georgia Assembly," pipeline counsel said, contending that no man is justified at this time in taking on the responsibility of blocking a national defense necessity.

Rails Hit Defense Claim

Counsel for Georgia rails struck at the national defense claims of their opponents and charged the President's letter to Chairman Lea did not refer to Southeastern's pipeline, because the line would not be constructed to the east coast and the President's concern centered on that area.

The big question in this issue is whether or not rail transportation should be destroyed, was the claim of A. B. Conger, representing the rails.

Rails had contended before the Georgia Committee they would lose 10% of their petroleum tonnage in the southeast if the pipeline is allowed to operate, with resultant equal loss in employment. But pipeline officials countered with charges that claims regarding loss of business made by rails to the Interstate Commerce Commission were far less than 10%.

Pipeline transportation represents progress, the committee was told, and rails are fighting a progressive trend that represents a cheaper and safer means of transportation.

Fear General Rate Revision

Rails, however, contended that any savings in transportation brought about by the pipeline would not be passed on to the consuming public.

Pipeline counsel contended, that rails are fearful of a general freight rate revision in the southeast.

Representative of the Port of Savannah testified Georgia's port would lose 20% of its petroleum tonnage if the pipeline is completed.

At the end of the 3-hour debate, only 66 of the total 69 committee members attending the hearing went into executive session, it is said. The decision favoring the 2 bills that would enable construction of the line was close—35 to 30—with the committee chairman withholding his vote.

Cole Obtains Data On S.E. Pipelines

Special to N. P. N.

ATLANTA, Ga., March 3.—Before Chairman Cole of the Cole Oil Investigating Committee left here for Washington with the body of the late Rep. W. D. Byron, he told NATIONAL PETROLEUM NEWS that although his stay had been cut short by the tragic death of his colleague in a plane crash near here, he had obtained necessary information regarding gasoline pipelines and transportation conditions in the Southeast.

Mr. Cole's sub-committee was called upon to check into reports revealed by President Roosevelt that completion of one and commencement of another pipeline in the Southeast had been delayed by opposition from other carriers. President said he hoped the subject would be included in hearings by the Cole Committee if the matter was not settled meanwhile.

Mr. Cole indicated hearings by his sub-committee would be resumed within a few weeks after his return to Washington. From other sources came reports that at that time the committee was expected to give rail and pipeline representatives involved in the southeastern transportation controversy an opportunity to present their contentions before the committee.

At the same time, Commissioner Cole is said to have indicated to other sources here that other members of his sub-committee might make personal investigations in the southeast.

Clean Tanker Rates Remain Unchanged

N. P. N. News Bureau

NEW YORK, March 3.—Both "clean" and "dirty" tanker rates were unchanged the past week with no open market fixtures reported for Gulf-N. Hatteras movement. Last paid for "clean" tonnage continued at 36c for gasoline, 38c for kerosine, and 40c for No. 2 fuel oil.

Boat men said the market for tonnage was "soft" although few bottoms were reported available for March. "A good offer for 3 or 4 boats would stiffen this tanker market up almost over-night," one added.

"Dirty" boats were tighter than "clean", according to some reports. Last paid for 10-19.9 gravity was 45c with unconfirmed reports that owners were now asking 50c. No fixtures were reported for "dirty" bottoms during the week. Foreign tonnage was reported slower and although some off-shore business was said to have been offered, no recent fixtures were made, according to reports.

ICC Calendar On Oil Trucking

DECISIONS

Moore Northern Haulers, Watertown, N. Y. (MC 22145, sub. 1) Issuance of a certificate approved, upon compliance by applicant with certain conditions, to operate as a common carrier of empty oil drums from points in New York to Sewaren and Rutherford, N. J.

* * *

HEARINGS

Willard M. Whitney, doing business as Philadelphia Freight Forwarding Co., Philadelphia, (MC 68807, sub. 1) March 24, Philadelphia, on application to extend operations as a contract carrier of petroleum products in containers in States of New York, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, New Jersey, Connecticut, Rhode Island, Massachusetts, and the District of Columbia, over irregular routes.

Truck Competitive Rail Rates Take Little New Oil Tonnage

N. P. N. News Bureau

TULSA, March 3.—Oil industry of Oklahoma, Kansas, Texas and parts of Arkansas and Missouri has been operating under so-called "truck-competitive" rail rates on petroleum for some time now, but reports from refiner and jobber sources in this general area indicate there has been no appreciable swing away from trucking to rail transportation of products as result of the new lower rail rates.

Unlike some Ohio jobbers, most distributors of petroleum in these southwestern states are in a position to utilize either truck or rail transportation. As result, they are in better position to switch immediately to the mode of transportation cheapest to them from the viewpoint of cost and most valuable to them from an economic standpoint.

A survey among truckers of petroleum products within and from Kansas indicates common and contract carriers can meet the "truck-compelled" rail rates on shipments over 75 miles. Nature of terrain covered and volume shipped by trucks, however, are factors that have whittled down and counteracted some advantages of truck transportation over rail in some instances. In any event, the margin under which for-hire truckers operate is at present narrow and amounts to almost a break-even proposition under certain of these conditions.

Suspend High-Cost Runs

Some few contract and common carriers have been forced to suspend operations in the Kansas area through their inability to keep transportation costs below rail rates. Suspension of these trucking operations, however, are said to be limited mostly to some truckers whose transportation costs were high because of small capacity equipment used.

On the other hand, however, truck operators with large and efficient units have maintained their tonnage and in some cases have expanded their operations. Fact that several large truckers in Kansas are replacing worn equipment with new and larger capacity units indicates confidence in their ability to maintain their tonnage in competition with the reduced rail rates.

Private Trucker Is Factor

It was said at hearings on Kansas and Oklahoma "truck-competitive" rail rates that the biggest competitive factor undermining rails' petroleum tonnage was the private trucker. While their costs are unknown and operations geared to individual marketing set-ups, they continue as a competitive factor in the race for petroleum tonnage along with for hire truck carriers.

In Oklahoma too, reduced rail rates have resulted in elimination of certain unprofitable hauls by truckers operating under common contract carrier authority. But here again, those few jobbers forced to switch to rail deliveries have had their bulk storage on rail sidings to fall back on.

For the most part, it is said for-hire truckers operating in Oklahoma have not been adversely affected by "truck-competitive" rail rates. It is admitted that revenue derived from truck shipments based on rail rates have been narrowed considerably and in some instances have "pinched" some operators. There have been some reports of truckers hauling intrastate at slightly below local rail rates.

Trend, therefore, is toward greater exploitation of truck advantages to small marketing operations, increase in truck capacity and toward private carrier trucking either by the supplier or distributor.

By-Pass Bulk Plants

Distributors who own their own trucks have little to worry as result of "truck compelled" rail rates, they say. In many instances, their trucks pick up a load of gasoline from a nearby refinery, dump part of its contents into service station storage along the way and at destination unload the remainder of the contents into regular bulk storage built years ago on rail sidings. This bulk storage is maintained as a back-log supply, to be re-trucked back to service stations when needed. These dump directly from the truck to service station storage, by-passing the bulk plant, are a distinct advantage claimed for truck hauling and have been evaluated at 0.125c per gal. and up.

Some contract carriers have bolstered their competitive position by hauling gasoline from refinery to the distributor's tanks and then picking up a load of natural gasoline to be delivered on the back-haul to the refiner.

Trucking Stronghold

Texas, with its wide expanse of territory, is a stronghold of trucking. Rails attempted several months ago to invade this territory by reducing their rate, but the reductions were small and their so-called "truck-competitive" rates are now considered a serious misnomer. Fact that cross country highway distances are considerably shorter than rail distances, in many instances, would make it difficult for rails to meet truck competition even with rates based on a truly truck-competitive mileage scale.

Texas legislature has moved toward liberalizing the truck load limits. (NPN, Feb. 26, 1940, p. 24). Should proposals to hide the Texas truck limit from 7000 to 35,000 lbs. pass, resultant reductions in ton-mile costs to truckers, would place rails at a still more decided disadvantage. Rails are expected to take another look at their so-called "truck-competitive" rail rates if and when the legislature stamps its approval on higher truck load limits. But no matter what the transportation trend is in Texas, most jobber operations are geared to either truck or rail transportation.

Socony Plans Additions To New York Pipeline

NEW YORK, March 3.—Construction will start early in 1942 on two additions to the Buffalo-Syracuse, N. Y., pipeline recently completed by Socony-Vacuum Oil Co. Inc., a company official told NATIONAL PETROLEUM NEWS late last week. New extensions will run from Buffalo to terminals at Ithaca and Elmira, he said.

Chicago Refiners May Seek Crude Oil 'In West'

TULSA, March 3.—Possibility that the Chicago district refineries may have to follow the advice of Horace Greeley and "go west"—for crude oil was indicated in a Western Trunk Line application for reduced rail rates on crude shipped from Riverton and Lander, Wyo. to Chicago and Sheboygan, Wis.

Proposal calls for a 68c a bbl. reduction in rates from the Wyoming points to Chicago, to 87c; and for a 62c a bbl. cut on the oil shipped to Sheboygan, to 93c.

New California Pipeline Planned by Shell

LOS ANGELES, March 1.—Shell Oil Co. was reported planning the construction of a 90-mile pipeline from the Ventura Avenue oil field to Wilmington. Cost of the 10-inch line was estimated at $1,750,000 and completion of the line was said to be scheduled for July, 1941.

NEW YORK, March 3.—Sales of taxable gasoline in New York state totaled 1,836,976,683 gals. in 1940, an increase of 4% over 1939, department of taxation and finance has announced.

Wider Export Rules For Metal Packages

N. P. N. News Bureau

WASHINGTON, March 4.—Export Control Administrator Russell Maxwell today broadened regulations requiring export license for export of metal drums and containers having capacity from 5 to 30 gals., inclusive, to include:

"Those containing or clearly intended to contain gasoline, lubricating oil, crude oil, fuel oil, diesel oil, gas oil or petroleum jelly (including petrolatum of low grade to be used as lubricant or to prevent rust)"

General Maxwell also has advised customs collectors that no individual licenses will be required to Great Britain and Northern Ireland when exporter places following general license numbers on his declaration: GEA 2 for petroleum—crude oil, GEB 2 for Gasoline, GEC 2 for tetraethyl lead, GED 2 for lubricating oil, GEE 2 for naphtha, GBL 2 for bromine, GBM 2 for ethylene, GBN 2 for ethylene dibromide, GHP 2 for drums and containers and GHT 2 for tanks.

Transportation by Trucks Rises 3.5% in January

N. P. N. News Bureau

WASHINGTON, March 3.—Tonnage hauled by truck transporters of petroleum products during January was 3.5% over January 1940, American Trucking Assns. report. Transportation of petroleum products accounted for slightly more than 9% of the total January truck tonnage, despite a 5.7% decrease from December.

Support Free Highways, Urges General Markham

NEW YORK, March 3.—Motorists' support of efforts to prevent the enactment of toll-road legislation now being promoted in several states was urged by Baird H. Markham, director of the American Petroleum Industries Committee, who declared today that free highways must be preserved as an essential part of America's transportation system.

Mr. Markham commended the anti-toll-road stand taken by the American Automobile Assn., and stated that toll roads are being most persistently sought in states where diversion of highway funds is heaviest.

"If these raids on the road funds were halted, in most instances there would be ample revenue to build all the highways needed without reviving the moribund toll road," Mr. Markham said.

OIL TAX NEWS

Iowa Issues Special Booklet To Fight 'Gas' Tax Diversion

CLEVELAND, March 1.—A specially prepared booklet entitled "Why Iowa Needs an Amendment to Protect Its Highway Fund," has just been issued by The Iowa Highway Users Conference.

Purpose of this booklet is to convince members of Iowa's oil industry and the public at large that legislation is needed to protect "Iowa's highway future."

States how having constitutional amendments prohibiting gasoline tax diversion are shown in chart on this page.

Reviewing the history of tax diversion, this booklet states:

"Up until 1929 the states, with only minor exceptions, devoted their automotive tax revenue to highway financing. Then came the depression. Automotive tax revenue of the states during the depression-low years did not decline as greatly as did revenue from other sources. This tempted some states to raid their highway funds to make up budgetary deficits.

"Each of 30 states tapped their highway funds to the extent of $1,000,000 or more. Fourteen additional states tapped their road funds for lesser amounts. Only 4 states maintained an entirely clean record. Thus, the roots of diversion were implanted in 44 of the 48 states.

More than $1,000,000,000 of such special-purpose tax funds were diverted by the states for uses having nothing whatsoever to do with roads. However, the trend is now in the opposite direction. Besides the 11 states that have adopted constitutional amendments, approximately 20 additional states have reduced or abolished their diversions in recent years.

The remarkable success of amendments to protect highway funds during the past few years indicate that the public, does not approve of diversion."

Suggested amendment to prohibit tax diversion in Iowa follows:

"All motor vehicle registration fees and all licenses and excise taxes on motor vehicle fuel, except cost of administration, shall be used exclusively for the construction, maintenance and supervision of the public highways exclusively within the state or for the payment of bonds issued or to be issued for the construction of such public highways and the payment of interest on such bonds."

Reasons, given in this same bulletin, why citizens of Iowa should have a chance to vote on the amendment to prevent diversion of road funds follow:

1. Safe, adequate highways are vitally important to Iowa citizens. The purpose of the amendment is to insure the highway taxpayer of good roads at minimum cost.

2. This amendment allows the people of Iowa to decide whether the present policy of spending highway tax revenues actually for highways shall be continued until they themselves decide otherwise.

3. Tourists spend $135,600,000 annually in Iowa. A system of good roads is the best assurance that these tourists will continue to travel into Iowa.

4. The state highway department and the federal government have spent a large amount of time and money in making a survey of our present and future highway requirements. This scientific long-term program can be carried out only by carefully safeguarding our highway tax money.

5. More than one-fourth of all the communities in Iowa depend upon highway transportation for contact with other parts of the state. Protection of the state's highway system is vitally important to the residents of these communities.

6. Farmers are among the chief users of motor vehicles in this state, but farm vehicles are almost worthless without adequate highways. Furthermore, farm values are increased 20 to 50% as a result of highway improvements. Therefore, farmers of Iowa should be allowed to say at the polls whether or not they want highway improvements to be continued.

7. The taxpayers of Iowa have invested more than $300,000,000 in their highway system, and they should have an opportunity to protect this investment.

8. Most Iowa counties have outstanding road bonds. The source of revenue for retirement of these bonds should be protected.

9. Iowa has never yet failed to match its federal highway allotment. It will not fail if special highway taxes are used for roads.

10. Protection of highway funds through a constitutional amendment has been tried and tested in many states and has been universally successful. The people of Iowa should have an opportunity to indicate on the ballot whether they also would like to obtain this protection.

Roads Built From 'Gas' Tax 'Are First Line of Defense'

N. P. N. News Bureau

CLEVELAND, March 1.—When Wisconsin motorists, who have paid more than $253,291,000 in gasoline taxes to state and federal governments, observed the event this week, F. M. Elliott, secretary of Wisconsin Petroleum Industries Committee, said:

"Highways built chiefly with gasoline tax revenue now constitute the first line of defense of the nation," says Mr. Elliott, who is co-operating in celebration of the event in this state.

"These roads, built to meet the peacetime needs of the nation, are now ready to serve the nation in any emergency. The United States has the finest system of highways of any nation in the world. With 27,000,000 passenger cars in operation, the entire nation could be moved at one time, with a seat for every man, woman and child. The 4,500,000 trucks now operating on our highways could service the biggest army we could put into the field.

Collections Since 1919

"Wisconsin in 1925 began to levy a gasoline tax at 2c per gal. Although gasoline tax revenue expanded rapidly because of increased ownership and use of automobile, the tax rate was increased and now stands at 4c per gal. The federal tax adds another 1½c per gal. to the tax costs.

Pulled State 'Out of Mud'

"Last year the motorists of this state paid approximately $28,291,000 in gasoline taxes to the state and federal governments.

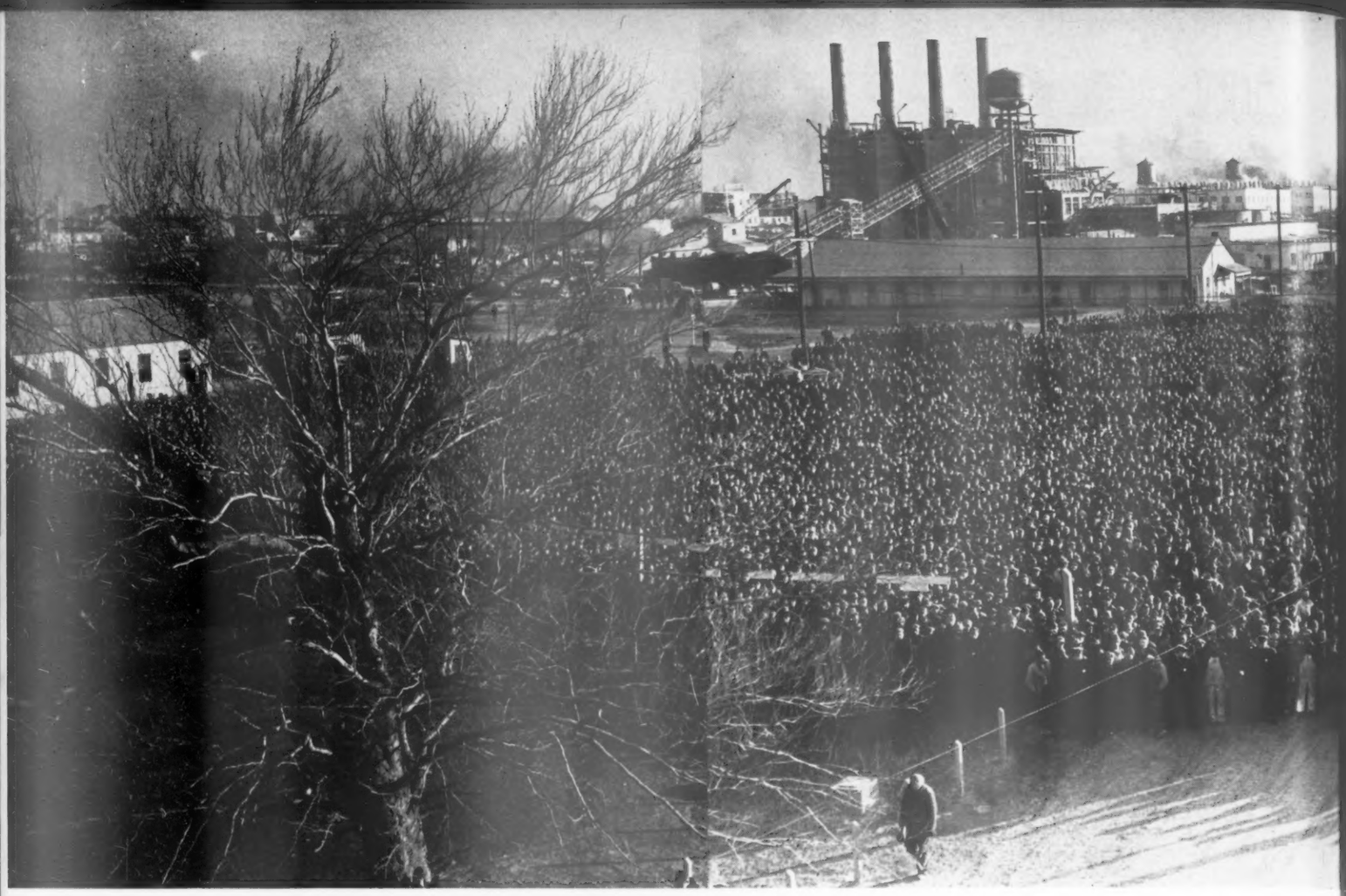
"The dollars paid by the motorists have pulled this state out of the mud. Our roads have contributed immensely to the social and economic progress of the nation during years of peace. These same roads are now ready to serve the state and the nation in times of emergency," continued Mr. Elliott.

11 States Prohibit 'Gas' Diversion

With increasing number of states enacting legislation to prevent gasoline tax diversion, below chart shows progress being made in the 48 states

PROGRESS AGAINST DIVERSION

CONSTITUTION PROHIBITS
AMENDMENT INITIATED
DIVERSION REDUCED
NO DIVERSION



Here They Come ... NEW CUS

FOR OIL MARKETERS IN NEW AREAS OF

By A. M. PETTY, N. P. N. News Editor

Billions of dollars are being spent by Uncle Sam on defense projects, creating new oil consuming areas in many states.

Tens of thousands of construction workers are required, thousands more will get jobs in completed plants. Many projects are purposely located in rural areas. Private automobiles are chief means of getting workers to and from job sites as adjoining communities cannot house the thousands flocking in from all over the U. S. And when plants are operating, automobiles will continue to transport workers from their homes in neighboring cities and towns. Gasoline demand soars.

New defense areas are creating opportunities—and problems—for oil marketers in many states.

To study how defense projects affect oil marketing, NPN sent A.M. Petty, news editor, to the Nation's No. 1 Defense Boom Town—Charlestown, Indiana, where $92,000,000 ordnance project employs 23,000 workers. What he found is told in this article, the first of a series on oil marketing in new defense areas. Partial list of defense projects—126 in 32 states—was published in NPN, Feb. 5, 1941.

FIRST a few cars, then a trickle growing rapidly to a stream rolls through the gate of Indiana Ordnance Works at Charlestown, Indiana. In the parking lot beyond are 2500 cars, most of them a year or two old but many brand-new. A few are jaloppies, 10 or 15 years old. It's the 4:30 shift coming off.

Here, as at many other defense projects in rural sections, the private automobile is the principal means of getting thousands of workers to and from the job. Influx of workers and heavy payrolls is creating new consuming areas for oil marketers in nearly every state.

At Charlestown there are 23,000 construction workers rushing this $92,000,000 powder and bag-loading project which the Army ordered for tomorrow but wants completed yesterday. Payroll totals over a million dollars a week now.

When completed before the end of this year, the powder plant will provide "permanent" jobs for nearly 10,000 and the bag-loading plant, another 3500. Most of them will depend on private automobile transportation to get to work. Output will be 600,000 pounds of smokeless powder daily (largest powder plant in the world today produces 35,000 pounds daily).

Powder plant is being built by E. I. du Pont de Nemours Co., Inc., which will also operate it, under contract with the War Department. Goodyear Tire & Rubber Co. will

SIXTEEN THOUSAND du Pont construction workers at Charlestown, Ind., powder plant gathered Feb. 1 to celebrate new world's safety record of 3,650,000 man-hours without accident. Not included are some 7000 contractors' workers. In background are a few of buildings on this 5500-acre site. (Photo by Louisville Courier-Journal)

W CUSTOMERS
AS OF DEFENSE

operate the plant making rubberized silk bags and loading them with powder for the Army's big guns.

Charlestown *was* a quiet little Indiana town of 936 population, 15 miles northeast of Louisville, Ky., on the road (Route 62) to Cincinnati. Residents were mostly middle-aged, retired farmers. Tourists didn't bother them. And trade went to the stores in Louisville or Jeffersonville and New Albany, on the Indiana side of the river. Charlestown dozed in the sun and didn't mind.

Suddenly, its quiet existence was jolted by the government taking up 5500 acres on both sides of Highway 62, including a section of the "business district" and some 65 of the town's 325 houses. Site runs down to the Ohio river. Later, another 4000 acres was taken for the bag-loading project. It adjoins the powder plant, on the Louisville side.

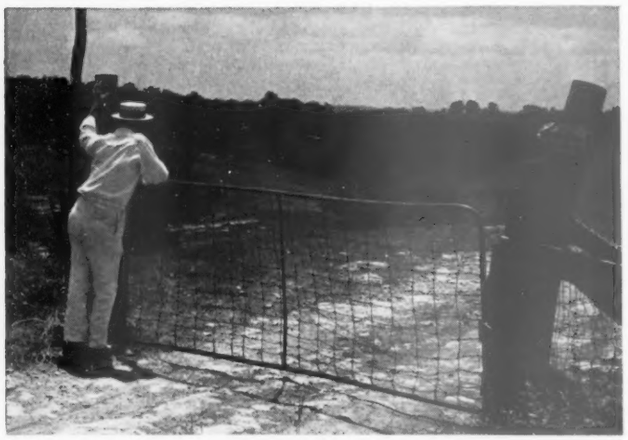
First workmen, a party of 40, went on the project Sept. 3, 1940. Ten days later the first concrete was poured. Now, among the 23,000 workers, every state is represented. Two units for making smokeless powder are slated for completion May 15, but are probably well ahead of schedule. Another two units will be in operation in early fall, the other two by end of 1941.

Work on the $18,000,000 bag-loading plant is just getting under way, with completion expected by November.

U. S. Army is also building an ordnance proving

Approximate size and location of new defense areas in southern Indiana

Charlestown WAS a quiet little Indiana town of 936 population . . .



Powder plant site was a rolling countryside six months ago . . .

Thousands of workers from all over the U. S. applied for jobs . . .

ground about 33 miles northeast of Charlestown, near Madison, Ind. And this project will provide 5000 construction workers with jobs for several months.

Common labor for the ordnance project was drawn from a radius of 60 miles in Indiana and Kentucky. Skilled labor was attracted from all over the United States. Of course, Charlestown couldn't absorb this horde of workers and job-seekers. Most of them commute by automobile from the Louisville area, but some live in towns 50 and 60 miles distant.

Louisville Board of Trade reports a business boom from defense projects, beginning last September. Louisville department store sales for first six weeks of 1941 were up 40%. More than 1000 cars an hour cross the Louisville bridge at traffic peak.

Gasoline gallonage in January for the Louisville area was well above January, 1940. Individual percentage gains for 5 oil companies in January were: 20%, 30%, 32%, 35% and 50%, respectively. Several pointed out, however, that severe cold weather in January, 1940, had cut gasoline consumption then.

In Charlestown, individual outlets reported increases of as much as 600% as compared with last year.

Charlestown now has 3300 resident population, more than half of them living in 510 trailers within town limits. Automobile population increased tremendously, jamming the streets and overtaxing service facilities.

The boom town is really an oil marketer's dream come true, but it is a nightmare, too.

There isn't a grease rack or lift in Charlestown, much less a lubritorium. Best offered is a roofed-over pit where at night the station operator drains crankcases by light of a flash lamp.

Cars line up 3 and 4 deep for gasoline. Station pumps run dry and the dealer cusses the tank truck driver, though he had made a dump several hours before. Retail margins are 4.2c on regular grade. And there's not a trackside within miles.

Some curb pump outlets do 10,000 gallons a month while others dry up with double-parked cars blocking their "drives".

A tank truck driver dopes out a scheme to sell 2000 gallons of kerosine a week to trailer families.

Six men are kept hustling at a 3-pump, drive-in station —only drive-in in the town proper. A hand-operated, visible pump puts out 125 gallons of gasoline in an hour.

And there is a scramble for station sites, but labor to build them is difficult to find.

OUR first glimpse of the Indiana Ordnance Works, which has transformed a rolling countryside into a booming defense area, was from the cab of an oil truck, hauling out of the Louisville district.

Lining the road for several miles was a panorama of hundreds of buildings in all stages of completion. Naked steel frameworks swarmed with tin-helmeted iron workers. Alongside was a cluster of smokestacks of a power plant. With its huge retorts, tubes, tanks and pressure vessels of all shapes and sizes, the project was like a giant's laboratory extending as far as the eye could see.

Through the plant fence, we could see hundreds of trucks buzzing around like bees in a hive. Supply trucks were carrying in steel, ready-mixed concrete, pipe, cinders, lumber and dozens of other materials. One truck had an 800-gallon tank labelled "drinking water"; another flat-bed truck had tiers of seats to haul workers from one job to another, which might be a mile or two away.

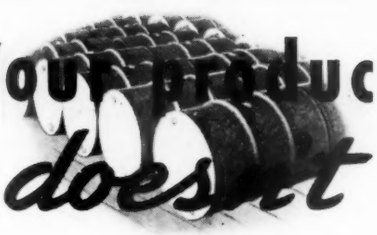
Our truck was a light delivery unit with two drums of gasoline for a sub-contractor inside the plant. At the gate the driver had to identify himself, show his invoice, have the load inspected and then wait 30 minutes for an escort. He nearly missed getting in because a new guard thought the truck should have a static chain.

"But I've been in a dozen times before and nothing was said," protested the driver. He got in, but next time he will have a chain.

This particular marketer hasn't a contract but delivers

He *has* to take chances

Your product *doesn't*



Meet a man who has to take chances—the man behind the wheel of a racing car. A bullet on wheels zooming down the straightaway . . . careening at terrific speed around curves . . . disaster, missed by inches!

Many products shipped in drums are taking chances, too—"racing" to their destination amid risks that make every mile a hazard. Yet this chance-taking is never necessary. Every product—your product—can be safeguarded by Tri-Sure Closures, the closures that eliminate leakage, waste, tampering, pilferage and substitution. Tri-Sure Closures have a seal which cannot be removed unless it is deliberately destroyed, a plug which is held tightly in place, a flange which assures complete drainage.

Send your next shipment to the "finish line" in the fine condition in which it started. Don't take chances with your reputation—be sure it is as untarnished tomorrow as it is today. You can do it by equipping every drum with Tri-Sure Closures. Write today for complete information.

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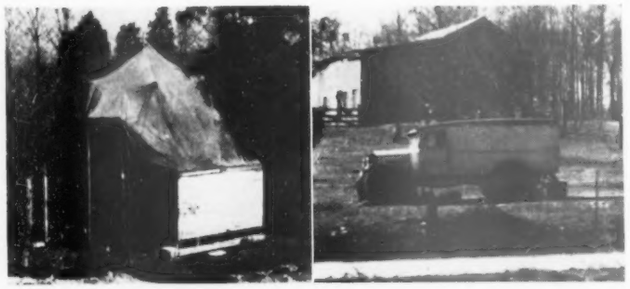
CLOSURES

Charlestown has 17 trailer camps housing 1800 people. . .



Only a few live like this . . .

Gasoline tanks await installation at cabin camp . . .

Nearly every trailer has kerosine drum outside . . .

orders to several sub-contractors who are among his supplier's national accounts.

Aetna Refining Co., Louisville independent refiner, has the du Pont contract for gasoline, kerosine and fuel oil, including diesel fuel. With some 150 trucks, diesel locomotives and other equipment, du Pont's takings may run as much as 10,000 gallons daily, for all products. Of this, gasoline probably makes up about half the volume, with diesel fuel a close second. Two of Aetna's transport trucks are kept busy supplying the du Pont account.

Gulf Refining Co. has the du Pont contract for lubricating oils. In addition, Gulf supplies a grading contractor with fuels and lubricants for his 175 trucks, bull-dozers, cranes and other equipment. Gulf's gallonage may approach that of Aetna.

Up the road towards Charlestown, we could see the "employes entrance". Through this gate every day but Sunday, enter about 3000 cars which are parked inside the plant. Each carry 4 or 5 workers. A state patrolman with traffic semaphore was put at the gate. But pedestrians and cars still tangled at changes of shifts. Then someone had the bright idea of a foot bridge over the highway. It was completed and in use that same day.

Defense workers have been drawn from all sections of the country, but they are definitely not "Okies". Their cars were better than average in a large city. By our count, 8 out of 10 entering the gate were 1938 models or newer. Many were brand new. And they weren't confined to the lower-priced class by any means.

There were a few jaloppies. But we found out later that generally they belonged to unskilled workers drawn from nearby farming areas.

Even on Sundays, there is a traffic jam along the road from Louisville. Thousands of people drive out to "see how the du Pont plant is coming along, and to see all those families living in trailers."

There are 17 trailer camps in Charlestown, housing 1800 persons—more than half of the town's 3300 population today, according to J. E. Zachary, city planning official appointed by the state. In addition, there are several hundred more trailers parked on farms and in camps nearby. These trailers are nearly all deluxe jobs. Only a few are home-made contraptions.

Outside of most trailers is a steel drum—and there lies a story of a wide-awake tank truck salesman.

This driver went around buying up old drums. Some oil marketers were glad enough to sell him theirs at 75c each—until they found that he was loaning them to trailerites and in this way sewing up kerosine accounts totaling 2000 gallons a week.

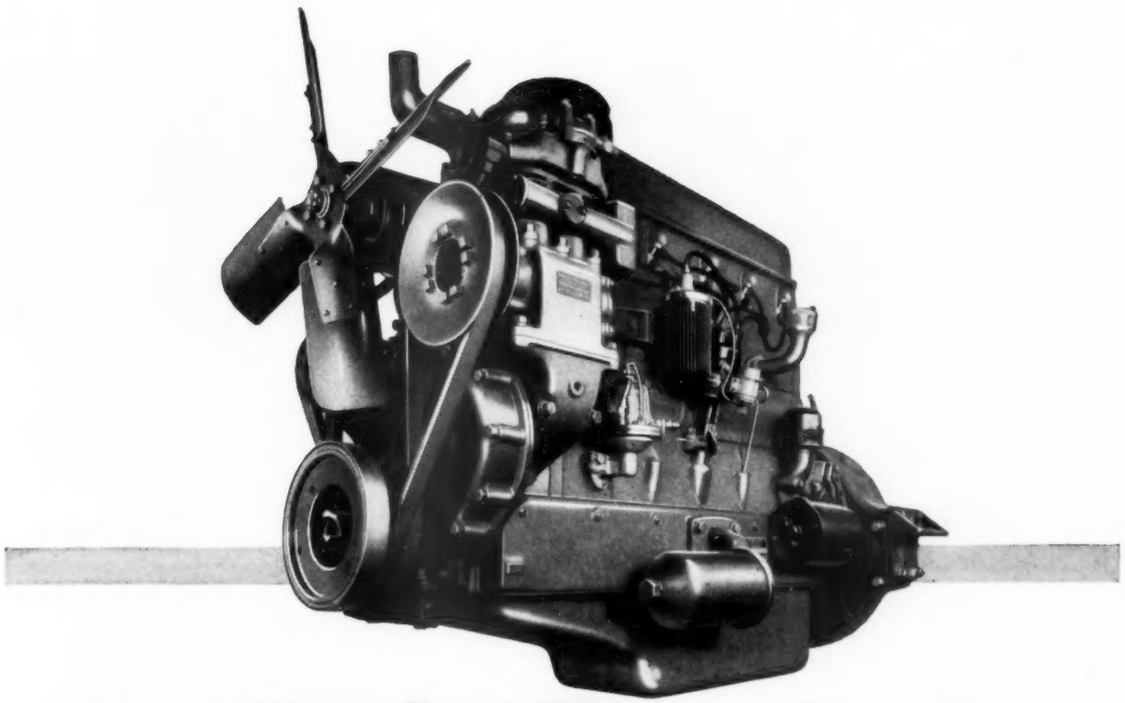
Some trailerites use No. 1 fuel in their stoves. It is about 1.5c cheaper than kerosine which generally sells at 9.3c tankwagon. Many trailer residents, though, still tote their "coal oil" in 5-gallon cans from the gasoline dealer where they generally pay 13c a gallon. Some containers are simply 1-gallon glass jugs.

Trailers may help Charlestown escape the fate of gold-rush boom towns in the old West.

Federal authorities at first talked of large scale-housing projects in or near the town. Local interests opposed this. State of Indiana backed them up, appointing Henry B. Steeg as Defense Planning Co-ordinator to wrestle this and other problems with federal officials. Mr. Zachary is Co-ordinator Steeg's assistant for the Charlestown area.

Both Steeg and Zachary believe overbuilding would make a "ghost town" of Charlestown, in event the powder plant is shut down after the "emergency". Officially, the du Pont powder plant is to operate at capacity for one year; semi-officially the word is that it will run 2 or 3 years, according to Mr. Zachary. And there are some who say production will continue for 5 years. After its powder-making days are over, according to local gossip, the company will convert the plant to the manufacture of Nylon or other peacetime du Pont products.

Purposely, Steeg and Zachary take a pessimistic view



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GMC

GASOLINE and DIESEL TRUCKS OF VALUE

New station will be first to greet motorists coming under viaduct from highway

of the situation. They want no more additional housing in Charlestown than would be necessary to accommodate the 250 or 300 workers needed for maintenance if the powder plant is closed. A federal project for 75 individual houses seems fairly certain now, said Mr. Zachary.

Louisville, according to present plans, will get a 150-unit housing project, Jeffersonville, 75 units, and New Albany, 100 units. Additional housing for the 10,000 to 15,000 workers operating the completed powder and bag-loading plants at Charlestown will also be built in these three cities (known as the Falls Cities), Mr. Zachary hopes, because they can absorb these houses into their realty market even if the Charlestown plants are closed.

Meanwhile, trailers will continue to house most of the transient population of Charlestown and bulk of the construction workers commute from cities and towns up to 60 miles distant. And if no large-scale housing project is located near the Charlestown plants, most of the operating force will also have to commute.

To oil marketers, this means that thousands of workers will drive to the plants each day or else drive to railroad stations in the Falls Cities, park their cars and take the shuttle trains (buses also take a few to the plants now).

Nevertheless, in Charlestown there is a premium on desirable locations for service stations. Several marketers have stations planned or are building. Others are looking, dickering.

Two well-located stations within the town limits and on the Cincinnati-Louisville highway were wiped out when du Pont took over land on both sides of the road. Both were near the employes' gate through which 3000 cars a day now pass.

One outlet was a motor sales agency run by Earl Conaway. The building is now inside the plant fence and Mr. Conaway has moved up the road and built a garage and station on a location leased from another supplier.

The other station was at an even better location. It was on the corner of the highway and the road going under the viaduct into the main part of town, which lies west of the B & O tracks. This station was doing a rushing business when the property was taken over by du Pont in mid-February.

Another company had a curb-pump outlet (two pumps —one regular and one Ethyl) just off the town square in Charlestown. It was reported doing 10,000 gallons a month when closed in October. The dealer was ousted by the landowner, a storekeeper, who had himself been forced to vacate and wanted to build a store where the gasoline dealer was. The dealer claimed a verbal lease but even so that doesn't count much in boom-town days.

SOME other curb-pump outlets have been hard hit by double-parking and street dug up for sewerage system being installed.

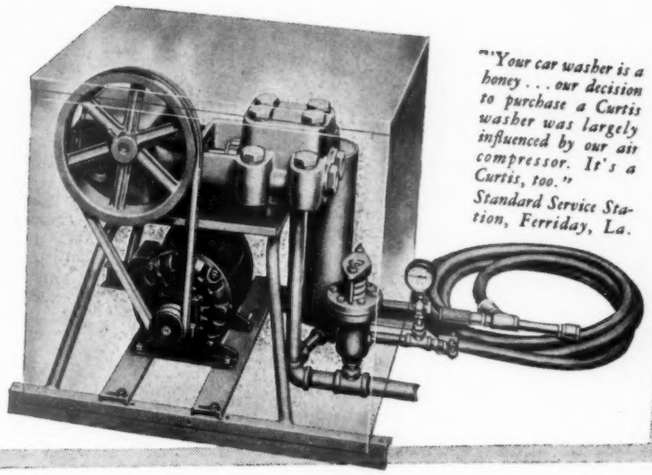
Ohio Oil Co. has leased a corner site near the town square in Charlestown. Plans are for a modern drive-in station, with enclosed lubritorium, and a restaurant combined. Scarcity of labor has delayed construction.

Texaco has a new outlet at a cross-roads location, just north of town, on Route 3. Tanks and pumps are going in. The place is a newly-built restaurant and store with 10 tourist cabins alongside. Facilities are planned for parking 25 trailers. Across the road, other interests are building a 50-trailer camp; water well has been sunk and "streets" graveled.

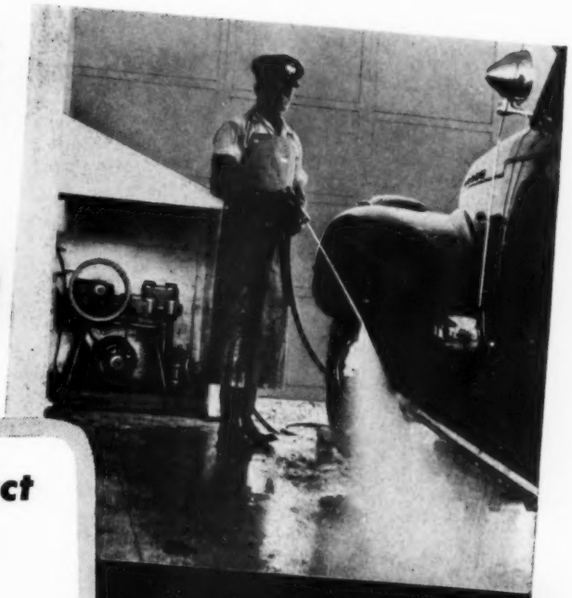
Lessee at this Texaco outlet is Alfred Neuenschwander who was out in Oregon panning for gold. Pay dirt was running thin. Back to Missouri he went, picked up his family and came on to try his luck in the new defense boom town. He works at the powder plant as a millwright. His wife and relatives run the business.

Two marketers told us that they had checked into the Charlestown situation and decided against locating a station there. One said, "We have found location sites to be beyond what we consider desirable and have passed up plans for a station in that town." The other pointed to

One of many enterprises of John P. Willinger, Charlestown service station operator, is "Little Heaven" trailer camp



"Your car washer is a honey . . . our decision to purchase a Curtis washer was largely influenced by our air compressor. It's a Curtis, too."
Standard Service Station, Ferriday, La.



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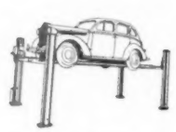

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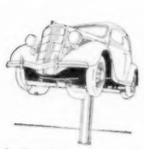
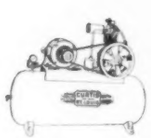


Curtis Hydraulic Rotating Lifts . . . oil locked . . . safe . . . 16 ft. self-leveling platform . . . drop away wheel guides . . . handles all cars.



Curtis Compressors . . . dependable, low cost air supply . . . precision built for long life . . . ¼ to 10 H.P., single and two-stage.

CURTIS PNEUMATIC MACHINERY COMPANY
1965 Kienlen Avenue, St. Louis, Missouri

Please send me complete information and prices on the Curtis Car Washer.

Name.....

Address.....

City.....State.....

Mid-day is comparatively quiet at Willinger's Service Station in Charlestown. Best day recently was 1200 gallons; a year ago his monthly gallonage was 2500

New station being built by Carl Lutz to be operated by John P. Willinger

the tremendous capacity of the plant, saying that it could make all peacetime needs in a short while "so in the very near future Charlestown will be a ghost town unless, of course, we get into the war."

First station being built in Charlestown proper has been leased to Gulf Refining Co. It is on right-hand side of the road coming under the viaduct, first corner. Directly across the street is another desirable corner which several companies have eyed—one marketer even staked out station lines but cooled off when the owner jumped his price to $6500 (it may be even higher now). And this price is probably more than 10 times pre-boom values.

The new Gulf station is being built by Carl Lutz. He owns the site and will lease the completed building to Gulf. Getting the construction work done was fairly simple for Mr. Lutz—he's in the concrete-mixing business and also runs a lumber and building material supply company across the street. Building is of concrete-block construction, will have white finish and conform to Gulf design. It will have two bays, one with a hydraulic lift. Driveways are of concrete, wide and sweeping. Another pump island may be added soon on the other side, said Lutz.

Up the side street about 100 yards is another Gulf

Carl Lutz beside pump at new station

Looking from lubritorium of new station, across street is trailer camp where Charlestown's 75-unit federal housing project may be built

Excuse us!

WE'VE BEEN TELLING ONLY ½ THE STORY

HERE'S THE ½ YOU KNOW

All makers of $1.00 anti-freeze admit the importance of boiling points. If the boiling point is lower than the heat developed by the engine, anti-freeze boils away . . . protection is lost.

We have proved over and over again that Super Pyro has a higher boiling point than competing $1.00 types . . . that Super Pyro lasts longer. That, in fact, in many cases, the initial fill gives "all-winter protection."

But... HERE'S THE OTHER ½!

You know that the stronger the anti-freeze solution is, the lower its boiling point. The important fact is: No matter how strong a solution you use . . . *no matter whether the boiling point is 185°, 180°, or even 175°* . . . if it is a Super Pyro solution it will protect to a far lower temperature than a solution of any competitive type of $1.00 anti-freeze.

So...

HERE'S THE WHOLE STORY...

SUPER PYRO LASTS LONGER... It has a higher boiling point! • SUPER PYRO PROTECTS BETTER . . . It has a lower freezing point! • SUPER PYRO NETS YOU MORE SATISFIED CUSTOMERS!

SUPER PYRO ANTI-FREEZE

$1. PER GAL.

outlet. It is a drive-in station (the only one in the town proper). Mr. Lutz owns this station and formerly ran it himself, selling Gulf products since 1926. But other interests required his full attention, so he leased it out. John P. Willinger now operates Lutz' old station and will take over the new one.

It was at the Willinger station that we got a real insight into oil marketing in a defense boom town.

Mr. Willinger is a keen-featured young man about 30, but he could be several years on either side of that mark. He runs his many business affairs in an unhurried, friendly manner with an informality that doesn't jibe with business textbooks but gets results. Adjoining the station, he has a shed roofing over a grease pit and next to that a garage. He also sells Pontiacs, though he has no showrooms; during January-February he sold about 10 new cars and probably twice that many used cars. And he operates "Little Heaven," a camp where 70 trailers are parked; they provide more customers for his station.

His present station has one electric computer and two hand-operated, visible pumps (the kind where gasoline must be pumped into a glass bowl and drained by gravity.) One of the visible pumps is back against the station wall, hard to get to; and it seems to be permanently dry.

Arriving at the Willinger station about 5 o'clock Friday evening—pay day, we were advised to "stand around and watch". We did.

Checking his gallonage, we saw 9 cars and one truck buy 96 gallons of gasoline in little over half an hour. Most of them took regular; some asked for Ethyl. None inquired for third grade. And if the stick showed they needed oil, they bought and it was about two to one in favor of premium-grade oil. All trade was cash; none asked for discounts. Retail margin is 4.2c.

During the hours from 5 to 8 o'clock while we stood under the canopy, there were only three times when there was not at least one car at the pump island—and it was only for a minute or two. Most times there were two or three cars on the drives with several more backed up the street. When we first arrived we counted five tire repair jobs being handled or waiting; but this was unusual. The air compressor never stopped running while we were there.

Probably half of Willinger's customers are townspeople and their cars are older models. His sales of used cars and garage business have probably boosted this type of trade. We remarked that his trade didn't have the high percentage of new cars that we had observed among the workers driving on the Louisville road. "Maybe they need new cars to travel that distance as fast as they do. Jalopies wouldn't hold up," he said with a grin.

Five helpers couldn't keep up with the rush of business and two of them went off at 6 o'clock. Two battery chargers were loaded to capacity. Willinger reported batteries and tires were fast-selling.

Between times, there was a steady stream of foot customers, mostly from the trailer camps. They bought kerosine, cigarets by the carton, cigars by the handful or box, and a dozen other items.

Suddenly, the electric pump's tank went dry. This left only the hand-operated visible with about 125 gallons of Ethyl in its tank.

"Give 'em Ethyl at 'regular' price," ordered George Gallman, Willinger's assistant, as he jiggled the 'phone to call the bulk plant (the truck, we heard later, had made 13 trips to Charlestown that week).

The tank truck arrived in nick of time like the hero of a Saturday afternoon movie thriller—when the last 10 gallons was going through the pump.

Driver's dilemma was this: When the 750-gallon truck had a full load, Willinger's tanks would sometimes be half full or else the truck would have only several hundred gallons and the tanks would be nearly empty.

Willinger told us his best day was Feb. 7, a Saturday, when he pumped 1200 gallons between 7 AM and 9 PM, of which 886 gallons went through the regular pump and balance was Ethyl. His gallonage in January was 17,000 gallons as compared with about 2500 in same month a year ago, he said. February probably will top January.

COMPETENT, courteous assistants is one reason for Willinger's success. We watched George Gallman impress on a wind-burned Kentuckian what a "bargain" he was getting in buying Ethyl at "regular" price and urging him to use premium grade all the time. "It'll make this jaloppy (1928 model) jump out from under you," he said.

Returning from a trip to his trailer camp on the hill, Willinger was accosted by a foot customer who had waited patiently for half an hour.

"I'd like a minute of your time, Mister, just to sorta ease my mind about that new car I ordered," said the customer, a construction worker. "Some of the boys ordered maroon cars and got blue. My wife wants to make sure ours is maroon—the order blank says 'plum wine'. And another thing, my copy doesn't say it's an '8'. They might deliver us a '6' instead."

Willinger bracketed in "maroon" and inserted "8". The customer went away happy with his well-worn order blank.

At the new station, Willinger expects to operate 24 hours a day. It will have about 5000 watts of floodlight. He said he was going to install a $400 overhead centralized lubricating system. Undecided about the old station, he may keep it open as the townspeople feel at home there.

We didn't get to talk with Earl Conaway who has the other drive-in station, across the tracks and out on the highway. So many customers were crowding his place, that we didn't have the temerity to ask our questions (though he probably is just as hospitable as other people

PAY DAY! Workers rush to check out through numbered gates. Weekly payroll is over a million dollars. Average pay check for 23,000 construction workers is $50

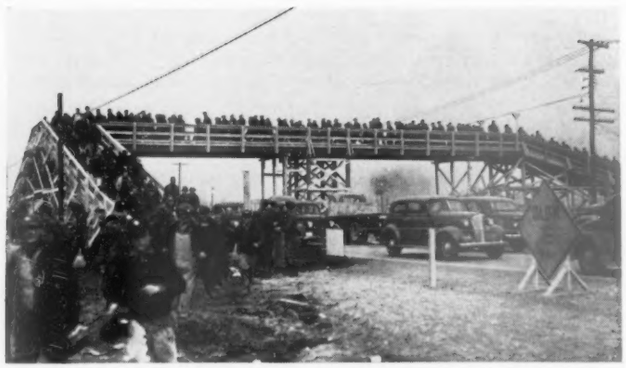
HOW'S YOUR TACKLE?

IF you're "fishing" for more customers, take stock of what you're using to "bring 'em in"! Service stations throughout the country are discovering that the streamlined, functionally-designed CALCO-METER has a gallonage-boosting appeal for today's motorists. Furthermore, beneath the gleaming enamel casing of the CALCO-METER is a pumping mechanism that has demonstrated its "million-gallon capacity" for *smooth*, *quiet*, *accurate* service. This means that every Gilbarco CALCO-METER is endowed with a dependability that lowers servicing costs as it builds volume. Shrewd operators who get the facts, get Gilbarco-built CALCO-METERS...Write for *Bulletin 96* today! It will be mailed free and without obligation!

CALCO-METER 96

THE MILLION-GALLON PUMP

GILBERT & BARKER MANUFACTURING COMPANY
Springfield, Mass. • Toronto, Ontario, Canada



Workers pour across highway bridge, avoiding traffic jam below

of Kentuckiana). We heard that Conaway turns away more than twice the business he used to do at his old location, now inside the plant grounds.

One factor complicating the situation for marketers trying to decide their stations building plans is the report—it may be only gossip—that in event of war the government would close Highway 62 from Charlestown to a point well below the ordnance project in direction of Louisville. With plant buildings within stone's throw of the road, there might be danger of sabotage. This would throw traffic on the Cincinnati-Louisville through Charlestown and over Route 403 to Sellersburg and thence on Route 31 to Louisville area. Route 403 is now being improved.

Offsetting this report is fact that bids were to be opened March 4 for widening the Charlestown-Louisville road (Route 62) to four lanes with a wide center parking strip.

Below Charlestown, on the road to Louisville, there are several other stations on property taken over by the ordnance project or the railroad for its new, second line of track. We were told that some of these will seek new locations in same vicinity.

Jeffersonville, 13 miles from Charlestown and across river from Louisville, had a population of 12,000 which is now reported at near 20,000.

Coming into Jeffersonville, there are 9 stations within 150-yard radius of the traffic light. All seem to be doing a good business, several said they had doubled or trebled their gallonage over last year's at this time.

Busiest of all was a trackside selling at cut prices. It was by far the best lighted (though using only 3600 watts), which may explain in part its pulling power. Down the street, another trackside wasn't doing nearly as much business.

Maurice Court, Texaco dealer for 10 years in Jeffersonville's "gasoline alley", told us most of his increased business came from neighborhood residents, which include many plant workers. He said few of the homeward-bound workers stopped.

On the same street, but beyond congested "gasoline alley", is a Shell leased station, operated by W. P. Kuntz. He reported that many workers' cars stop on the way to and from Charlestown.

"One drove a brand-new Chrysler in last Friday morning (pay day)," said Kuntz. "He wanted enough 'gas' to get him to work. Going through all his pockets, he found only 32c. That night he drove back and bought a tankful, peeling a $20 off a fat roll to pay for it. Yes sir, these defense workers make plenty money—and they spend it."

Asked if his gallonage had doubled, Kuntz smiled, "Much more than that. And I am selling lots of tires and batteries. I don't stock them, but the tire company gets them over here quick when I 'phone in an order."

Like many others along route to the defense boom town, Kuntz is now keeping his station open 24 hours a day so he can catch business from workers on both day and night shifts.

One company's expansion plans call for modernization of some outlets in Jeffersonville, as well as building a station in Charlestown. Another marketer reports, "We've got to add another truck and driver, if our gallonage keeps going up."

Indicative of the increased traffic from Louisville, through Jeffersonville, to Charlestown are comparative figures on bridge crossings before and after the boom started. Biggest hour to date was between 6 and 7 in the morning of Tuesday, Feb. 19, when 1003 vehicles crossed the bridge going north, toward Charlestown. A year ago at same hour crossings totaled about 50.

Here are some comparative figures on Ohio river crossings at Louisville, supplied by Edward H. West, chairman of Louisville Municipal Bridge Commission:

Average Number of Vehicles Crossing Louisville Bridge During 6 Week Days Ending Feb. 15, for 1941 and 1940

Direction	Hour	Vehicles Crossing 1941	1940
North	6-7 AM	913	47
North	7-8 AM	419	92
South	12-1 AM	299	32

The bridge commission chairman estimated that defense activities on north side account for 1460 cars crossing each week day. Most of these carry 5 or more men, and the total transported ranges between 5840 and 7300, he said.

Roughly, Mr. West figured about one-third of the Charlestown workers live north of the river, two-thirds on the Kentucky side. Another estimate, based on January Charlestown employment figures was that 38 to 40% of the workers lived in Louisville.

Louisville Board of Trade has advised NPN that estimated construction force at du Pont powder plant at Charlestown was 23,000 on Feb. 26, and that the bag-loading plant was just getting under way with 400 working. Completed powder plant will employ between 8000 and 10,000 on "permanent operation", and the bag-loading plant, between 3500 and 4000.

This indicates that employment at Charlestown is still going up. On January 2nd, newspapers reported the construction force at 14,000; reaching 17,000 later in the month. On Feb. 6th, it was placed at 21,500; and on Feb. 11th, 22,500. It was 23,000 on Feb. 26.

Wage rates are reported to be: bricklayers, $1.50 an hour, plus $1 a day bonus, for 8-hour day with time-and-a-half for Saturdays and beyond 40 hours; carpenters, $1.37 an hour, plus $1 a day; and common labor, 60c an hour. Gossip has steamfitters making $102 a week and steel workers drawing $48 for an 8-hour day on Saturdays. The plant is "open shop".

So, the estimate of station operators and others cashing workers' pay checks that the average weekly wage is

Charlestown project boomed business at this Independent jobber's station in Madison, Ind. 30 miles away

CHECK THE CAN TOO ✓

The Atlantic Refining Company made a careful check before deciding on the proper containers for their quality motor oils . . . and the organization to produce them.

Naturally, Crown Can is proud of the fact that the job of protecting Atlantic Lubricants was entrusted to this up-and-coming organization.

Bring your can problems to Crown . . . where they will be given the alert, attentive consideration of men vitally concerned in seeing your interests fully protected. Crown's cooperative spirit has been a primary factor in Crown's rapid rise to third place in the industry in less than four years.

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Division of Crown Cork and Seal Company

BALTIMORE ST. LOUIS HOUSTON MADISON ORLANDO
FORT WAYNE NEBRASKA CITY

CROWN CAN

INDEPENDENT AND HELPFUL

$50, doesn't seem far out of line. And $50 multiplied by 23,000 amounts to $1,150,000 a week.

Obviously, these defense-boom wages have affected personnel in other lines. Marketers find it difficult to keep competent men. Here and there, however, we ran into station men who had had a chance at Charlestown work but turned it down because it was "too temporary".

Most of the workers at Charlestown are "just plain country boys". From our contact with them in lunchrooms, stores, employment office, service stations and elsewhere, we'd say that they were rough and tough but not the chips-on-shoulder type such as, for example, in the eastern steel plants. Only accents we heard were drawls and twangs from different sections of the U. S. License tags showed they come mostly from the Middle West, South and Southwest. Few were from the East.

There has been little or no "labor trouble". The powder plant is one of the few major defense projects where a union card isn't necessary to get a job. Unions made threatening gestures a week or so ago to get a "closed shop" contract at the bag-loading project, but it was quickly "settled"—although union leaders wouldn't tell newspaper men what the "terms" were.

State employment offices handle the hiring, furnishing men as called for by du Pont or the contractors. Recently, there have been reports of dismissals but, with total employment increasing, the indication is that this is rather a weeding out process.

Because defense projects, especially powder plants, are vulnerable to sabotage, the du Pont company is strict in guarding the property and picking workers.

Workers are fingerprinted and photographed. A badge, with number and photograph, is given each man. If the picture doesn't match his face, he doesn't get in. Guards inspect each man carefully, since G-Men with phoney badges sneaked by some guards (P. S. these guards are no longer employed). Story is told how an Army officer, following a party with passes, had bulled his way by several guards only to be stopped by one who wouldn't let him by, despite his uniform. The Army man argued and argued. Finally, with a grin he pulled out a pass and showed it to the guard, complimenting him on his vigilance. That guard was made a foreman the next day.

Strictest safety rules have become routine procedure which probably explains why the 16,000 du Pont workers on Feb. 21 hung up a new world's safety record of 3,650,000 man-hours without an accident. Except for one accident sometime ago, the record would be about twice that figure. Incidently, it was Shell Oil Co., Inc., which had held the safety record up to that date.

The rule against drinking inside the plant is stringently enforced. Typical is the story that a whiskey bottle was found on the plant property. Fingerprints on the bottle were checked, the man to whom they belonged was fired.

Truly, the apparent efficiency of management and character of workers with whom we came in contact buoyed our faith in the capacity of American industry and labor to prepare for whatever the future may hold.

Independent Jobber is "Early Bird" of Madison, Ind., Defense Boom

Thirty-five miles north of Charlestown, toward Cincinnati, is the town of Madison, Indiana. The boom has reached up there with many Madison residents commuting to powder plant jobs and a number of transient workers housed there.

But Madison now has its own defense project. A 60,000-acre bombing range is being constructed about 7 miles northwest. This huge tract, about 5 miles wide and 17 miles long, begins just north of the roadside hamlet of Wirt in Jefferson county.

Driving out to Wirt, we turned down a newly-graveled road scarcely wide enough for two cars. About two miles of this, and we came suddenly upon a clearing. There was a parking lot with hundreds of cars, maybe a thousand.

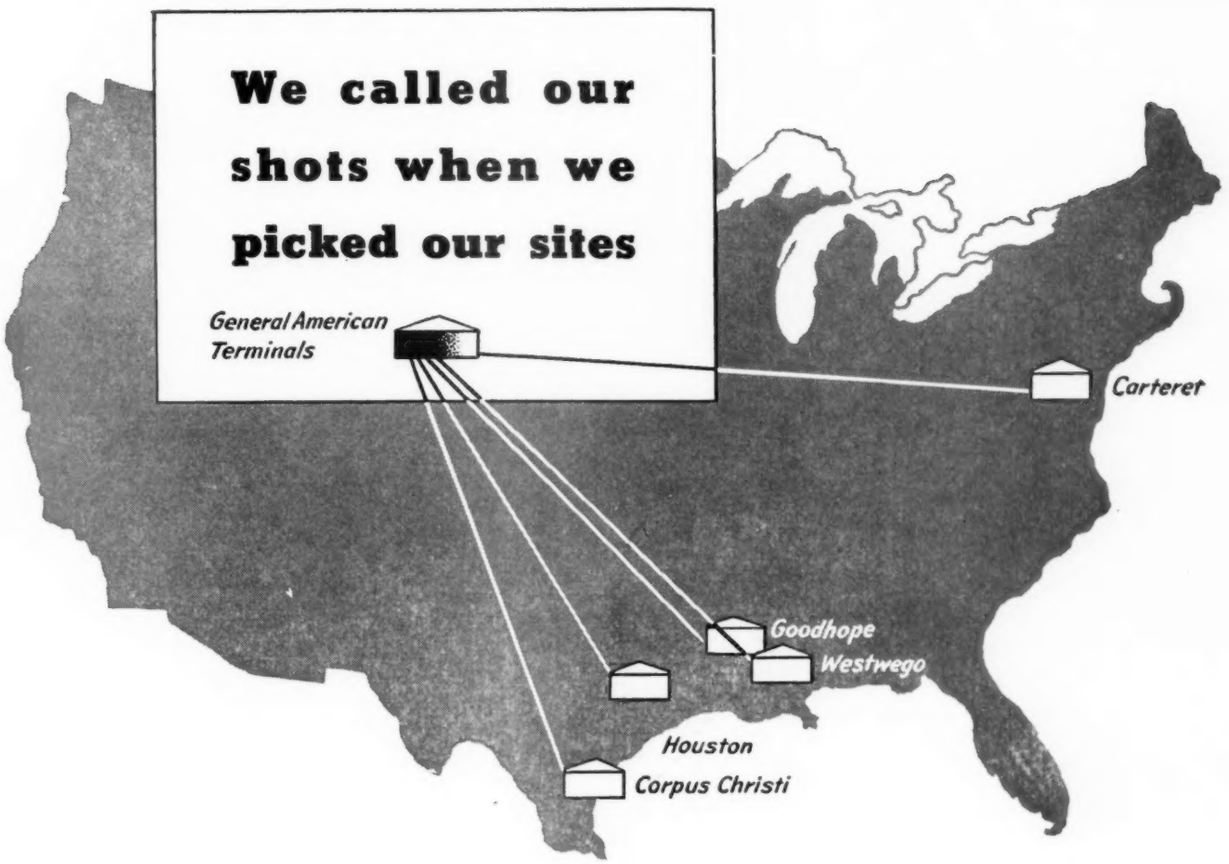
Not much could be seen from the road, but we learned later that this project involves construction of more than a hundred buildings and will provide permanent employment for 800 civilians when completed. Meanwhile, some 5000 workers will be employed on the construction job.

Right smack across the road from the entrance was a small, frame building being erected—a filling station and restaurant combined. The "early bird" builder turned out to be E. C. Storm, whose Tri-Point Oil Co., with headquarters in Madison, covers a large part of the county.

"We've felt the Charlestown boom at our station in Madison," said Mr. Storm. "So, we thought we would get in on the ground floor of this new defense project near home. We are experimenting with a station opposite the entrance. We have a long-term lease on the corner property —which is the only site available. We'll put in station and restaurant equipment, lease it out to an operator and see what happens."

Mr. Storm has been an independent jobber for 17 years, selling gasoline and motor oils under his own brand all that time and "have read NATIONAL PETROLEUM NEWS regularly since the day we started in the oil business."

When U. S. Army took 60,000 acres for proving ground north of Madison, Indiana, a local oil marketer decided to "get in on ground floor" of this defense boom. Pictured here is station and restaurant he is building opposite project's entrance. In background can be seen hundreds of construction workers' cars parked. "Road closed" sign makes highway curve around station.



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Strategically located to serve you!

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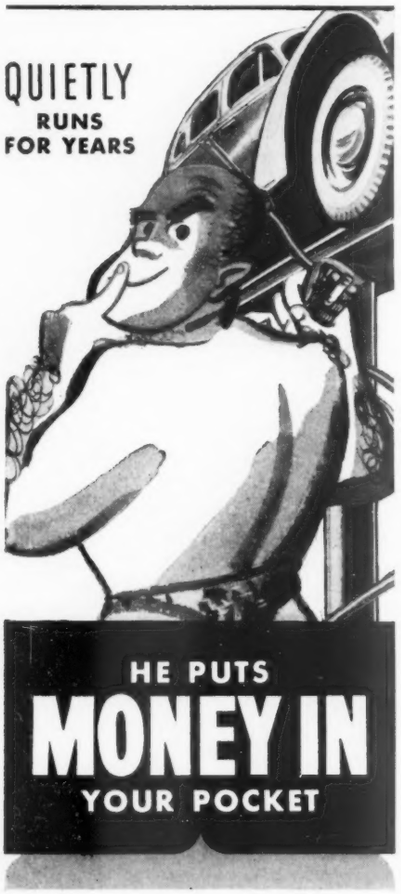
A DIVISION OF GENERAL AMERICAN TRANSPORTATION COMPANY



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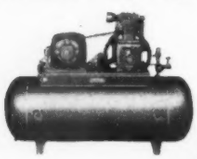

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SAFETY . . . In Oil Marketing

ADDITIONAL safe practices in oil marketing, as followed by many oil marketing companies throughout the United States are listed below.

These excerpts are from a 29-page booklet, just issued by the American Petroleum Institute and is titled "API Accident-Prevention Manual on Operation of Service Stations, Second Edition, 1941." Readers desiring copies of this manual should write to American Petroleum Institute, Room 2040, 50 W. 50th St., New York City. Single copies sell for 25c while special rates are made on orders of 5 or more.

Following excerpts are a continuation from first portions of the A.P.I. manual which started in NATIONAL PETROLEUM NEWS, Feb. 19, p. 34.

ANTI-FREEZE SOLUTIONS

Alcohol Solutions Flammable

Alcohol-base anti-freeze solutions are flammable. When heated, they give off vapors that may be ignited. It is dangerous and foolhardy to use a lighted match for the purpose of looking into a radiator that contains an anti-freeze mixture.

Attendant Should Handle

Anti-freeze solution should be placed in the radiator of the customer's car by the service-station attendant, and not by the customer. Sealed cans containing anti-freeze solution should be opened outside the service station, not inside.

Check for Leaks

Because leaks permit vapors to escape and create a fire hazard, the cooling system and water heater of the car should be checked for leaks before anti-freeze mixture is placed in the radiator.

Drainings

Drainings from the radiator which contain alcohol anti-freeze solution should be treated in the same manner as other flammables. They should be disposed of promptly, and in a safe place.

Solution Poisonous

The ordinary alcohol-type anti-freeze solution contains methanol (methyl alcohol), commonly known as wood alcohol. Methanol is a poison, and should not be taken into the human system; it is particularly dangerous if swallowed in liquid form. It is the methanol itself that is harmful, and not some other ingredient added to the mixture; therefore, there is no way of rendering the solution non-poisonous. If alcohol is sold to be taken off the premises, the container should be labeled indicating the contents.

Handling and Storing of Drums

To reduce the fire hazard, drums used for alcohol should be kept outside while the service is in operation. Empty drums should be returned to the distributing plant. Alcohol should not be handled in open containers in the presence of stoves or other sources of ignition. Measuring receptacles should be drained and dried thoroughly before they are placed inside the service station.

Dispensing from Drums

Alcohol-base anti-freeze solutions can be dispensed with safety from drums by means of a tight hand pump which is equipped with a drip

Always look inside the car before opening the door. If this rule is not observed there is danger of small children, packages and other objects falling from the car

return. Faucets or valves are not so safe, because these may be kicked open or broken off. Air pressure should not be used to force anti-freeze solution or any other substance from a drum.

WINDSHIELD SERVICE

Save Fingers

The service-station attendant should neither grasp the door nor brace himself against the door jam of the customer's car for the purpose of reaching over to clean the windshield. Many painful injuries have resulted when customers slammed the door on attendants' fingers. The customer usually is not on the lookout to see where the attendant has placed his fingers.

Opening and Closing the Door

The attendant should observe carefully before he opens or closes the door of a car in the course of windshield service. If a door is opened suddenly, a child leaning against it might fall out. Furthermore, precaution prevents closing a door on a passenger's hand or foot. Frequently, if too much pressure was exerted during washing, the wind-wings have broken, causing severe cuts; and numerous minor injuries have resulted when attendants failed to watch the windshield wiper and the rear-view mirror brackets.

Cars in Motion

Cars in motion should not be serviced. Station attendants have been injured when they tried to give a final wipe to the windshield or window after a car had started.

Both Feet on the Ground

The service-station attendant should not stand with one foot on the ground and the other on the running board. If the car should move while he is in this position, he may fall, or the car may roll over one of his feet.

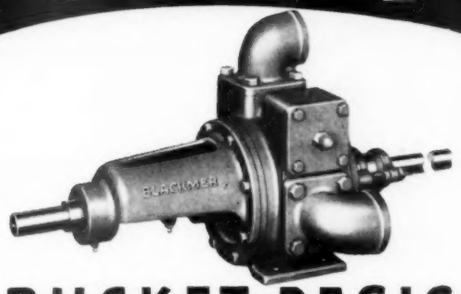
Beware of Dogs

Many motorists carry dogs in their cars, and frequently attendants have been bitten. Dogs in cars should not be petted, and it is better for the customer to hand the cash for the transaction out of the car than for the attendant to reach inside the car.

How To Lift—

Lifting and straining results in more injury—and frequently in the most serious injury—than any other type of hazard. Before a load is lifted, it should be viewed and considered from every angle. If necessary, assistance should be summoned. The lifting operation should proceed as follows: The person first should make sure that his footing is firm; his back should remain as vertical as possible; the article should be grasped as he bends his knees, and should be raised as the legs slowly are straightened. Thus the strain of lifting will be on the strong leg muscles. Lifting should not be done while the body is in an awkward position.

AS SURE AS 2+2=4



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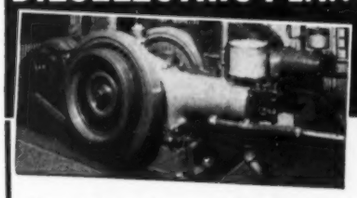

"Our light and power bills were costing us from $167.00 to $180.00 per month before we installed WITTE Dieselectrics. We are keeping an accurate cost on the two Dieselectrics each month and at no time has our cost for fuel oil and lubricating oil run over $28.40"—Southern Service Station.

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REPUBLIC

THE INDEPENDENT SUPPLIER FOR INDEPENDENT JOBBERS

REPUBLIC QUALITY

The superior quality of new REPUBLIC ROYALE GASOLINE and other REPUBLIC PRODUCTS is rapidly being recognized in many new districts along the Atlantic Seaboard and the Gulf Coast. Through research and with modern equipped plants REPUBLIC quality has been made superior.

GUARANTEED SUPPLY

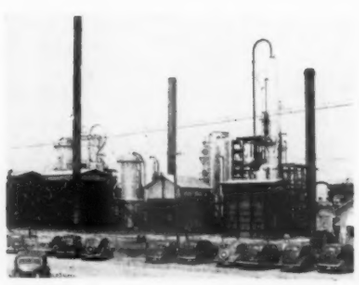
Republic Oil Company and associated interests make a fully integrated organization. Controlling its own oil wells, pipe lines, refineries and natural gasoline plants, the independent jobber is assured continuous supply of all products.

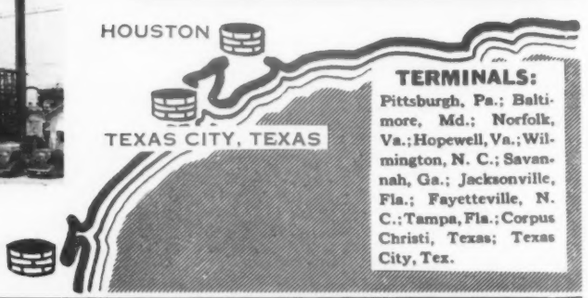
FRIENDLY COOPERATION

Republic Oil Company takes an interest in each individual jobber's problem. Tested and proved sales promotion ideas continuously offered by REPUBLIC helps the independent jobber increase sales and profits.

REPUBLIC PRODUCTS

Gasoline — Kerosene—Furnace Oil—Gas Oil—Bunker "C" Fuel Oil—Motor Oil—Automotive Lubricants.




HOUSTON
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TERMINALS:
Pittsburgh, Pa.; Baltimore, Md.; Norfolk, Va.; Hopewell, Va.; Wilmington, N. C.; Savannah, Ga.; Jacksonville, Fla.; Fayetteville, N. C.; Tampa, Fla.; Corpus Christi, Texas; Texas City, Tex.

REPUBLIC OIL COMPANY
BENEDUM TREES BLDG., PITTSBURGH, PA.

Truck Driver Rates "All American" In Safety and Sales

Frequently a story is printed about a truck driver somewhere who has driven so far or so long without a single accident, and every year, awards, citations and bonus payments are given hundreds of oil truck drivers for doing a good job.

"Safe as a tank truck driver" could well be the goal of all motorists, in view of the safe driving record of the thousands of operators of oil trucks.

However, while the management of the various companies remain proud of their safety records, the management may ask "but how about his sales record?"

The mere driving of a truck for a million miles without an accident, or being on the job for many years, is not all the story. More of the truck driver's record lies in his sales, collections, maintenance and general operations.

An "All-American" driver who rates high on all of these points is Charles Mayer. He has driven for the Indian Refining Co. in its Indianapolis district for 25 years, with no chargeable accidents of any kind.

In the course of more than 25 years driving, which goes back to faithful slow moving horses unable to travel more than 25 or 30 miles a day, Charlie has been a part of oil transportation history created by the modern motor truck. He says he has his fingers crossed, now that more and bigger army tanks are being produced. He remembers Mr. Ickes expressed hope that some day he would be able to drive the biggest army tank he could find right down the middle of the highway and shove every truck driver off the road, disregarding where he might land. "Should Hectic Harold do that to me, my record would be shot all to hell," he says.

Around the Indian Refining Co., Mayer is known for his unusual driving record, but he is also known for his selling ability and general all around efficiency.

Charlie, of course, follows all the company's operating instructions. He also has a boiled-down personal code, which any marketer could profitably pass on to his drivers, new or old, to memorize or review occasionally.

Mayer's personal code of truck operation is:

1. Never start the day without checking water, gasoline, windshield wipers, lights and brakes, tire inflation.

2. Keep speed under control according to driving conditions.

3. Use hand signals constantly.

4. Never leave equipment while loading or unloading.

In addition to Charles Mayer's safety record for driving 25 years without an accident, his selling ability and general efficiency is rated high. Mayer drives a truck for Indian Refining Co. at Indianapolis

5. Keep oily, greasy rags out of cab or tool box.

6. Be sure that truck is grounded at all times.

7. Stop at all railroad crossings. Look both ways and know that the road is clear.

8. Never take on or unload fuel with motor running or dangerously hot.

9. Be sure that muffler is in good shape.

10. Be sure that tank vents are not clogged.

11. Do not operate equipment unless it is in good condition.

12. Know traffic regulations and practices.

13. Know how to check brakes, headlights and so on.

14. Watch your health.

15. Remember you are a salesman; that driving is only one of the many qualifications necessary for success.

This code seems trite to the average marketer. It is. Yet a violation of 1 or more of these rules will be found in the average accident report where the driver is at fault.

On the leading truck routes in Indianapolis, the city has placed signs showing normal driving time from the point where the sign is located to the center of the city. The sign also indicates the time required during hours of congestion.

Mayer, following this idea, worked out a schedule of his own based on the time it normally takes to drive from the plant to his various customers, and the time it would take during the heavy traffic hours. Preparation of a schedule of this kind required a study of the various factors contributing to a more efficient trip. For instance, taking advantage of points where right turns are permitted on red lights; knowing where the stop lights are located, the condition of the streets, volume and kind of traffic during various hours.

This system is not only helpful in

REPUBLIC

PITTSBURGH, PA.

MAIN OFFICE

REPUBLIC PRODUCTS SUPPLIED QUICKLY — EASILY

TERMINAL FACILITIES

With modern equipped terminals at strategic points along the Atlantic and Gulf Coast, REPUBLIC PRODUCTS are available to independent jobbers quickly and easily.

WATER TRANSPORTATION

Republic Products are transported direct by Republic tankers and barges from our modern refinery at Texas City, Texas. This provides an adequate, economical and convenient source of supply to all Southern and Eastern Marketers.

AVAILABILITY TO JOBBER

We invite independent jobbers to visit one of our terminals. More than seventy-five million (75,000,000) gallons of Republic Refined Petroleum Products are constantly available through Republic's terminal facilities. And Republic is steadily growing. We are interested in helping the independent jobber increase sales and profits,—let us help you!

Write, wire or phone our nearest sales office for complete details on exclusive jobber franchise

BALTIMORE, MD.

HOPEWELL, VA.

NORFOLK, VA.

FAYETTEVILLE, N. C.

WILMINGTON, N. C.

SAVANNAH, GA.

JACKSONVILLE, FLA.

TAMPA, FLA.

REPUBLIC PRODUCTS

Gasoline — Kerosene—Furnace Oil—Gas Oil—Bunker "C" Fuel Oil—Motor Oil—Automotive Lubricants.

SALES OFFICES:

Benedum-Trees Bldg., Pittsburgh, Pa.; 30 Rockefeller Plaza, R.C.A. Bldg., New York; 3700 Leland Ave., Baltimore, Md.; 511 Union Trust Bldg., Petersburg, Va.; P. O. Box 152, Wilmington, N. C.; P. O. Box 1161, Savannah, Ga.;818 Graham Bldg., Jacksonville, Fla.; Second National Bank Bldg., Houston, Texas; P. O. Box 2425, Tampa, Fla.; P. O. Box 1222, Fayetteville, N. C.

REPUBLIC OIL COMPANY

BENEDUM TREES BLDG., PITTSBURGH, PA.

covering regular routes, but by knowing conditions it often permits this driver to use the bulk plant telephone to let a C.O.D. customer, who might otherwise be away, know just when to expect him. Often by returning a customer's call who has phoned in an order to the agent, arrangements can be made for delivery to fit in with other orders.

Even if he is one of the truck-driving "pests" that Secretary Ickes would "like to bump off the road with an armoured truck," NPN is glad to salute Indian Refining and Charlie Mayer for this remarkable safety record.

Fuel Oil Transported By 600-Gallon Plane In Central America

"A 600-gallon fuel oil transport aeroplane has been constructed at the factory of Transportes Aeros Centro Americanos (TACA) in Honduras, Central America. This is the largest commercial aviation company operating exclusively in Central America, carrying some 25,000,000 pounds of freight annually.

"With gold mining developing on a large scale, particularly in the interior of Nicaragua, the air line has transported heavy mining machinery and has been called upon to furnish the necessary fuel oil for its operation. To meet this requirement, the company recently converted one of its large three-engined machines. Cross bracing and a special floor was laid forward of the door and between the wings. In this space, a tank was mounted, made of aluminum with special baffles to prevent the rapid shifting of cargo. The tank is equipped with 2 gravity dump valves on the underside, one of which is a safety valve permitting of the release of the entire 600-gallon load in a few seconds, the other for the customary discharge into a storage tank at the point of use.

Loading equipment has been provided at Alamicamba, Nicaragua, where mining equipment and oil arrives by boat from the coast. A special receiving tank has been erected at the La Luz Mine Co.'s airport near Siuna, in Nicaragua, composed of bolted steel plates on a concrete foundation. The pilot can discharge his cargo into this tank without leaving the plane or cutting out his engines. At present, the time taken for loading is about 8 minutes, while unloading takes 6 minutes. Flying time from loading to discharging point is 25 minutes. The only alternative method of transport is by mule trains, which require from 3 to 4 weeks.

—*The Petroleum Times, London*

WISCONSIN Official Record

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ALL PETROLEUM MARKETERS
AND TANK CAR CONSUMERS

WISCONSIN

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TRADEMARKS

The following are trademark applications pertinent to our field pending in the United States Patent Office which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Munsey Building, Washington, D. C., trademark specialists.

THIALKENE, Ser. No. 438,378, Continental Oil Company, Ponca City, Okla. Filed Nov. 30, 1940. For sulfur-bearing oxidation inhibitor for use with lubricating oils and greases. Published: February 11, 1941.

DEEP-ROCK GREEN GASOLINE in circle. Ser. No. 424,351, H. N. Greis, Trustee for Deep Rock Oil Corporation, Tulsa, Oklahoma. Filed Oct. 9, 1939. (The words "Gasoline" and "Green" are disclaimed apart from the mark). For gasoline. Published: February 4 1941.

DEEP-ROCK SUPER GASOLINE, Ser. No. 424,352, H. N. Greis, Trustee for Deep Rock Oil Corporation, Tulsa, Okla. Filed: October 9, 1939. (The words "Gasoline" and "Super" are disclaimed apart from the mark). For gasoline. Published: February 4, 1941.

RITEWAY, Ser. No. 438,287, Rusk Oil Company of Philadelphia, Pa., Inc., doing business as Rusk Oil Co., Rusk Oil Co., Inc., Rusk Oil Co. of Philadelphia, Pa., Rusk Oil Company, Incorporated, Rusk Oil Company and as Rusk Oil Company, Inc., Philadelphia, Pa. Filed: November 27, 1940. For lubricating oils. Published: February 4, 1941.

SUNSET, Ser. No. 438,911, Sunset Oil Company, Los Angeles, California. Filed: December 16, 1940. For petroleum products—namely, gasoline. Published: February 4, 1941.

BLUTONE THE PERFECT STOVE OIL — THE BLUE COLOR IDENTIFIES IT on blue and silver background, (All wording disclaimed apart from the mark). Ser. No. 437,017, I. L. Schurman, Chicago, Ill. Filed: October 16, 1940. For stove and heating oil. Published: Jan. 21, 1941.

MARKETS

Pennsylvania

CLEVELAND, March 1.—With the exception of slightly higher quotations for white crude scale wax, refined products prices reported by Western Pennsylvania refiners were unchanged the last week in February. Neutral oils continued "very tight" while demand for cylinder stocks was heavier than for some time past, according to reports.

Quotations reported for 122-124 and 124-126 A. M. P. white crude scale wax at the end of the week were at 2.75c, New York, up 0.05c to 0.1c per lb.

Atlantic Coast

NEW YORK, March 1.—Light and heavy fuel oil prices were down as much as 0.4c at several points along the Atlantic Coast when northern and southern seaboard suppliers alike announced two successive downward revisions in their open spot quotations the past week. Gasoline was "steady and quiet" with no changes in quotations reported.

Kerosine quotations at New York were down 0.3c to 4.60c in tank cars. 4.50c in barges; light fuels also were down 0.3c to 4c in tank cars, 3.90c in barges.

Low quotations reported for kerosine were at 4.75c at Baltimore, Norfolk, Wilmington and Charleston, down 0.35c and for Nos. 2 and 3 fuel oils, 4.25c at these points, down 0.25c.

Tank car quotations for kerosine at Portland ranged from 5 to 5.20c, at Boston and Providence, from 4.90 to 5.10c, all down 0.4c on the lows. Nos. 2 and 3 fuels at Portland ranged from 4.40 to 4.70c, at Boston and Providence, from 4.30 to 4.60c, also down 0.4c on the lows.

Marine diesel oil, ships' bunkers, was down a dime to $1.65 a bbl. at New York Harbor, down 20c to $1.75 a bbl. at Philadelphia, Baltimore, Norfolk and Charleston, 20c to $1.65 a bbl. at Boston and 30c to $1.65 a bbl. at Providence. Several suppliers reported reductions, ranging from 10c to 30c.

Gulf

NEW YORK, March 1. — Several grades of gasoline were quoted higher at the Gulf the past week, according to reports here and from the southwest. No new inquiries or open spot cargo sales were reported.

Prices reported for 60 oct. unleaded gasoline ranged from 4 to 4.125c, up 0.125c on the low and for 68 oct. unleaded were at 4.50c, up 0.25c on the low. A refiner who had been asking 4.625c for min. 80 oct. (1939 Research) gasoline said he was now asking 4.75c. Another refiner said he was in the market to buy 80,000 bbls. of Min. 80 oct. and added "we haven't yet been able to locate any at 4.75c."

Still another refiner reported quoting 4.75c for 80 oct. for loading by March 15. "For loading after March 15, we would quote a higher price," this refiner said. "We're not anxious to move gasoline now," he added. Asking prices reported by other refiners for min. 80 oct. (1939 Research) ranged up to 5.375c.

California

LOS ANGELES, March 1.—Wide differences of opinion were expressed the past week by Pacific Coast suppliers as to the range at which gasoline was being offered for export in cargo lots. While no spot sales were reported, suppliers indicated that sales were being made to Pacific foreign buyers at figures lower than these sellers, individually, were willing to accept.

Although the opinion was not unanimous, the consensus was that Pacific Coast export quotations for gasoline in cargo lots had advanced with the upward swing in Gulf Coast prices and were, at present, as follows: 375 e. p. blend, 70 oct., 4.75 to 5.125c per gal.; 390 e. p. blend, 68 oct., 4.625 to 5c; 390 e. p. blend, 66 oct., 4.50 to 4.875c; 400 e. p. blend, 65 oct. min., 4.375 to 4.75c; U. S. Motor, under 65 oct., 4.25 to 4.625c.

Increasing demand for heavy oils was reported to have brought quotations on 14 gravity, high-sulfur Wilmington crude to $0.52 per bbl. at the well. Trucking costs to the refinery were estimated at about 8c per bbl., which would bring the price to $0.60 per bbl., the field schedule for this grade.

Mid-Western

CHICAGO, March 1.—No changes in refined products quotations were reported by refiners or tank car marketers in Chicago the past week. Cold weather late in the week revived demand for burner fuels, according to some reports. Gasoline shipments and demand for industrial fuels were "picking up", some sellers said.

Open spot sales reported by three tank car marketers during the week were: 1 car of 80-82 oct. Ethyl gasoline at 4.625c, 11 cars of 72-74 oct. at 3.75c, 3 cars of 63-66 oct. at 3.25c 3.50c, and 3.75c, respectively, 1 car of 60 oct. and below at 3.125c, 2 cars of range oil at 3.75c, and 1 car of No. 2 straw at 3.125, FOB Group 3.

Quotations reported by refiners ranged from 5.375 to 6c for 80-82 oct., 4.375 to 5c for 72-74 oct., 4 to 4.50c for 63-66 oct., 3.625 to 4.125c for 60 oct. and below, 3.375 to 3.625c for No. 2 straw, and two refiners reported 3.875c for range oil, FOB Group 3.

Quotations reported by tank car marketers ranged from 4.25 to 4.375c for 80-82 oct., 3.75 to 3.875c for 72-74 oct., 3.25 to 3.75c for 63-66 oct., 3.125 to 3.50c for 60 oct. and below, 3.375 to 3.875c for range oil, and 3 to 3.375c for No. 2 straw, FOB Group 3.

Mid-Continent

TULSA, March 1.—Sales of 5 cars Grade 26-70 natural gasoline at 2.125c, FOB Breckenridge, representing 0.125c increase, was reported by a Texas seller late the past week. Other sales of "several cars" each, also were reported at 2c, FOB Breckenridge, by another seller.

Quotations reported at close of the week ranged from 2.125 to 2.25c, FOB Breckenridge. Grade 26-70 for shipment from Group 3 origin points was quoted 0.125c higher at 2.50c by one seller; another seller reported quoting 2.375c.

Demand for refined gasoline was in good volume throughout the week, refiners said. An Oklahoma refiner reported buying 80 cars of gasoline, 50 cars of 80-82 oct. Ethyl and 30 cars of 72-74 oct., from another refiner at prices he said were higher than he had formerly paid. Reports of "less low-priced competition in past two weeks" were heard from three refiners. "We are revising contract prices upward," one refiner said. "Jobbers are asking to buy on a flat price basis rather than market-price-date-of-shipment," he added.

Lubes were said to be in good demand both for export and domestic shipment. "Contract prices for export shipment now compare favorably with domestic open spot prices," one refiner commented.

Heavy demand for heavy fuels, especially railroad type, ws reported by several Mid-Continent refiners. Three suppliers said that contract customers had requested maximum quantities of No. 6 for March delivery. An Oklahoma refiner said he would be "20% short on No. 6 by the end of March." One Oklahoma refiner reported quoting 65c for No. 6; in Kansas, two refiners reported quoting 65c.

REFINERY and SEABOARD PRICES

In bulk lots by Motor Transport, Tank Car, Barge or Tanker as shown

(NOTE—Parenthetical figures after prices indicate number of companies quoting when less than three companies are quoting.)

HOW PRICES ARE REPORTED—

Refinery and Seaboard prices in National Petroleum News are gathered by PLATT'S OILGRAM and are as published in the Monday issue of the OILGRAM.

PLATT'S OILGRAM is a reporting service issued in three identical editions daily from News Bureaus at New York, Cleveland, and Tulsa, Okla. PLATT'S OILGRAM gathers and publishes what its publisher and representatives believe to be accurate news of sales, prices and current happenings affecting the oil industry and that will be of interest to its subscribers. As this information is usually private, OILGRAM reports it according to what it is able to obtain from sources deemed reliable.

All information is supplied without guarantee as to its completeness, accuracy time of transmission or promptness of delivery.

The subscriber receives this information for his private use and not for resale or further distribution.

Publisher reserves the right to change the extent, nature and form of showing this information at any time.

Prices shown in the tables are quotations (meaning sellers' general offers or posted prices), or actual sales prices, reported to OILGRAM by refiners for "open spot" transactions, except as otherwise specified.

Prices arrived at by discounts off a specified price or "market date of shipment," prices named in contracts or prices arrived at in accordance with any arrangement made prior to date of sale, are not for "open spot" transactions and therefore are not considered in making the price tables. Prices made to brokers and prices in "Inter-refinery" transactions are also not considered except as may be noted.

All prices are for "immediate" shipment except in Gulf Coast bulk transactions where shipment is generally to be made in ninety days. Prices are FOB refineries, pipelines, or tanker terminals in districts designated.

Prices shown are for quantities in bulk such as tank car lots, motor transport lots or barge lots; and in cents per gallon; heavy fuel oils are in dollars per barrel of 42 U.S. gallons; wax and petrolatums are in cents per pound. Prices applying to barges or cargoes only are so designated.

Prices do not include taxes or inspection fees. Prices are published at the close of the business day.

Mid-Western prices in the tables were gathered from refiners with offices located in Chicago and the surrounding territory. While the prices are quoted on a Group 3 (Oklahoma) freight basis, this is in accordance with the custom of the oil industry which uses Group 3 as a price basis for the ease of comparing prices even when the material originates in another refining district. Other refinery prices are given by and for the particular refining district where the material is made and from which it is shipped.

When prices obtained by OILGRAM do not conform to these conditions the exception and the new conditions are noted in the news lead or in conjunction with the price table by footnote or otherwise, for the particular refinery or sales district involved.

Crude oil and products covered by OILGRAM'S news and price service, except where noted, have been represented to the publisher as fully up to the customary trade specifications indicated and according to the generally accepted methods of test: and all crude oil and all products thereof as having been lawfully produced and transported.

Any apparent error should be reported to the nearest OILGRAM or National Petroleum News office at once as no correction will be made after the second issue of the OILGRAM or National Petroleum News following its publication.

Summary of Daily Gasoline Prices (Feb. 25 to Mar. 3)

	Latest Prices Monday, Mar. 3	Friday, Feb. 28	Thursday, Feb. 27	Wednesday, Feb. 26	Tuesday, Feb. 25
U. S. Motor, (ASTM octane)					
80-82 octane Ethyl:					
Oklahoma	4.625– 6.00	4.625– 6.00	4.625– 6.00	4.625– 6.00	4.625– 6.00
Mid-Western (Group 3 basis)	5.375–6.00 (2)	5.375–6.00 (2)	5.375–6.00 (2)	5.375–6.00 (2)	5.375–6.00 (2)
N. Tex. (For shpt. to Tex. & N. M. dest'ns.)	5.50 (1)	5.50 (1)	5.50 (1)	5.50 (1)	5.50 (1)
W. Tex. (For shpt. to Tex. & N. M. dest'ns.)	5.625 (1)	5.625 (1)	5.625 (1)	5.625 (1)	5.625 (1)
72-74 octane:					
Oklahoma	(a) 4.375–5.00	(a) 4.375–5.00	(a) 4.375–5.00	(a) 4.375–5.00	(a) 4.375–5.00
Mid-Western (Group 3 basis)	4.375– 5.00	4.375– 5.00	4.375– 5.00	4.375– 5.00	4.375– 5.00
N. Tex. (For shpt. to Tex. & N. M. dest'ns.)	4.50 – 5.125	4.50 – 5.125	4.50 – 5.125	4.50 – 5.125	4.50 – 5.125
W. Tex. (For shpt. to Tex. & N. M. dest'ns.)	4.625 (2)	4.625 (2)	4.625 (2)	4.625 (2)	4.625 (2)
63-66 octane:					
Oklahoma	4.00 – 4.50	4.00 – 4.50	4.00 – 4.50	4.00 – 4.50	4.00 – 4.50
Mid-Western (Group 3 basis)	4.00 – 4.50	4.00 – 4.50	4.00 – 4.50	4.00 – 4.50	4.00 – 4.50
N. Tex. (For shpt. to Tex. & N. M. dest'ns.)	4.125– 5.00	4.125– 5.00	4.125– 5.00	4.125– 5.00	4.125– 5.00
W. Tex. (For shpt. to Tex. & N. M. dest'ns.)	4.125 (2)	4.125 (2)	4.125 (2)	4.125 (2)	4.125 (2)
60 octane & below:					
Oklahoma	3.625– 4.125	3.625– 4.125	3.625– 4.125	3.625– 4.125	3.625– 4.125
Mid-Western (Group 3 basis)	3.625– 4.125	3.625– 4.125	3.625– 4.125	3.625– 4.125	3.625– 4.125
N. Tex. (For shpt. to Tex. & N. M. dest'ns.)	3.75 – 4.50	3.75 – 4.50	3.75 – 4.50	3.75 – 4.50	3.75 – 4.50
W. Tex. (For shpt. to Tex. & N. M. dest'ns.)	3.875 (2)	3.875 (2)	3.875 (2)	3.875 (2)	3.875 (2)
Motor Gasoline, 72-74 octane (ASTM)					
New York harbor	5.50 – 6.80	5.50 – 6.80	5.50 – 6.80	5.50 – 6.80	5.50 – 6.80
New York harbor, barges	5.25 – 5.50	5.25 – 5.50	5.25 – 5.50	5.25 – 5.50	5.25 – 5.50
Philadelphia district	5.50 – 7.00	5.50 – 7.00	5.50 – 7.00	5.50 – 7.00	5.50 – 7.00
Baltimore district	5.50 – 6.75	5.50 – 6.75	5.50 – 6.75	5.50 – 6.75	5.50 – 6.75
Motor Gasoline:					
74-76 Octane: (L-3)					
Bradford-Warren (Western Penna.)	6.00–6.25 (2)	6.00–6.25 (2)	6.00–6.25 (2)	6.00–6.25 (2)	6.00–6.25 (2)
Other Districts (Western Penna.)	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00

REFINERY PRICES

Gasoline—U. S. Motor (ASTM Octane) except where otherwise specified

Prices Effective	Mar. 3	Feb. 24
OKLAHOMA		
80-82 oct. Ethyl	4.625– 6.00	4.625– 6.00
72-74 oct.	(a) 4.375–5.00	(b) 4.375–5.00
63-66 oct.	4.00 – 4.50	4.00 – 4.50
60 oct. & below	3.625– 4.125	3.625– 4.125
60-62 400 e.p.	3.75–4.00 (2)	3.75–4.00 (2)
MID-WESTERN (Group 3 basis)		
80-82 oct. Ethyl	5.375–6.00 (2)	5.375–6.00 (2)
72-74 oct.	4.375– 5.00	4.375– 5.00
63-66 oct.	4.00 – 4.50	4.00 – 4.50
60 oct. & below	3.625– 4.125	3.625– 4.125
N. TEX. (For shpt. to Tex. & N. M. dest'ns.)		
80-82 oct. Ethyl	5.50 (1)	5.50 (1)
72-74 oct.	4.50 – 5.125	4.50 – 5.125
63-66 oct.	4.125– 5.00	4.125– 5.00
60 oct. & below	3.75 – 4.50	3.75 – 4.50
60-62, 400 e.p.	4.125–4.75 (2)	4.125–4.75 (2)
W. TEX. (For shpt. to Tex. & N. M. dest'ns.)		
80-82 oct. Ethyl	5.625 (1)	5.625 (1)
72-74 oct.	4.625 (2)	4.625 (2)
63-66 oct.	4.125 (2)	4.125 (2)
60 oct. & below	3.875 (2)	3.875 (2)
CENT. W. TEX. (Prices to truck transports)		
80 oct. & above	6.00 (1)	6.00 (1)
72-74 oct.	4.50 (1)	4.375 (1)
67-69 oct.	4.00 (1)	3.875 (1)
62 oct. & below	3.625 (1)	3.50 (1)
AMARILLO, TEX. (For shpt. to W. Okla. & Tex. differential territory.)		
60 oct. & below	4.375 (1)	4.375 (1)
60-62, 400 e.p.	4.75 (1)	4.75 (1)

Prices Effective	Mar. 3	Feb. 24
KANSAS (For Kansas destinations only)		
80-82 oct. Ethyl	5.50 (1)	5.50 (1)
72-74 oct.	4.50 – 4.875	4.50 – 4.875
63-66 oct.	4.25 – 4.75	4.25 – 4.75
60 oct. & below	3.875– 4.125	3.875– 4.125
ARK. (For shipment to Ark. & La.)		
72-74 oct.	4.375 (1)	4.50 (1)
70-72 oct.	4.25 (1)	4.375 (1)
60 oct. & below	3.875 (1)	3.875 (1)
WESTERN PENNA. (Motor gasoline.)		
Bradford-Warren:		
74-76 oct. (L-3)	6.00– 6.25 (2)	6.00– 6.25 (2)
Other districts:		
74-76 oct. (L-3)	5.75 – 6.00	5.75 – 6.00
CENTRAL MICHIGAN (FOB Central Mich. refinery group basis for shpt. within Mich.; shpts. may originate at plants outside Central group)		
U.S. Motor: (Oct. L-3):		
72-74 oct.	6.50 – 7.00	6.50 – 7.00
67-69 oct.	5.50 – 6.25	5.50 – 6.25
Str. run gasoline, excluding Detroit shpt.	4.50 – 5.00	4.50 – 5.00
OHIO (S. O. Ohio quotations for statewide delivery and subject to exceptions for local price disturbances)		
72-74 oct.	7.125	7.125
CALIFORNIA U.S. Motor:		
58-61 grav., 375-400 e.p., 65 oct. & above	5.50 – 6.50	5.50 – 6.50
54-58 grav., for outside state shipment	5.00 – 6.00	5.00 – 6.00
54-58 grav., for instate shipment	5.00 – 5.50	5.00 – 5.50

Kerosine, Gas & Fuel Oils

Prices Effective	Mar. 3	Feb. 24
OKLAHOMA		
41-43 grav. w.w.	4.00 – 4.25	4.00 – 4.25
42-44 grav., w.w.	4.25 – 4.375	4.25 – 4.375
Range Oil	3.875– 4.125	3.875– 4.125
No. 1 P.W.	3.75 – 4.125	3.75 – 4.125
No. 1 straw	3.375–3.75 (2)	3.375–3.75 (2)
No. 2 straw	3.375– 3.625	3.375– 3.625
No. 2 dark	3.25 (1)	3.25 (1)
U.G.I. gas oil	3.25 (2)	3.25 (2)
No. 3 fuel	3.25 – 3.375	3.25 – 3.375
No. 6 fuel	$0.65 (1)	$0.65 (1)
14-16 fuel	$0.85 (1)	$0.85 (1)
MID-WESTERN (Group 3 basis)		
41-43 grav. w.w.	4.125– 4.25	4.125– 4.25
42-44 grav. w.w.	4.25 – 4.375	4.25 – 4.375
Range Oil	3.875 (2)	3.875 (2)
No. 1 p.w.	3.75 – 4.00	3.75 – 4.00
No. 2 straw	3.375– 3.625	3.375– 3.625
No. 3	3.25 – 3.50	3.25 – 3.50
No. 5	$0.75–$0.85 (2)	$0.75–$0.85 (2)
No. 6	$0.55–$0.60 (2)	$0.55–$0.60 (2)
N. TEX. (For shpt. to Tex. & N. M. dest'ns.)		
41-43 grav. w.w.	4.00 – 4.75	4.00 – 4.75
No. 1 P.W.	3.875 (1)	3.875 (1)
AMARILLO, TEX. (For shpt. to W. Okla. & Tex. differential territory.)		
41-43 grav. w.w.	4.50–4.75 (2)	4.50–4.75 (2)
No. 1 straw	4.00 (2)	4.00 (2)
KANSAS (For Kansas destinations only)		
41-43 grav. w.w.	4.25 (1)	4.25 (1)
42-44 gravity w.w.	4.375– 4.563	4.375– 4.563
No. 1 p.w.	4.00 – 4.25	4.00 – 4.25
No. 6 fuel	$0.65 (2)	$0.65 (2)

(a) One refiner reported quoting "3.875 to 4.50c" for 72-74 oct., the lower price applying only to shipments into restricted competitive areas.

REFINERY PRICES (Continued)

(NOTE—Parenthetical figures after prices indicate number of companies quoting when less than three companies are quoting.

Kerosine, Gas & Fuel Oil

(Continued)

Prices Effective	Mar. 3	Feb. 24
ARK. (For shipment to Ark. and La.)		
41-43 grav. w.w.	4.50 (1)	4.50 (1)
No. 1	3.875 (1)	3.875 (1)
No. 2	3.375 (1)	3.50 (1)
No. 3 fuel	3.25 (1)	3.375 (1)
Tractor fuel, for shpt. to Ark. points only	4.25 (1)	4.25 (1)
WESTERN PENNA.		
Bradford-Warren:		
45 grav. w.w.	5.375– 5.50	5.375– 5.50
46 grav. w.w.	5.625 (1)	5.625 (1)
No. 1 fuel	5.25 – 5.375	5.25 – 5.375
No. 2 "	5.125–5.375 (2)	5.125–5.375 (2)
No. 3 "	5.375 (1)	5.375 (1)
36-40 gravity	5.25 (1)	5.25 (1)
Other districts:		
45 grav. w.w.	5.125– 5.375	5.125– 5.375
46 grav. w.w.	5.25 – 5.50	5.25 – 5.50
47 grav. w.w.	5.375– 5.625	5.375– 5.625
No. 1 fuel	4.875– 5.00	4.875– 5.00
No. 2 "	4.875– 5.00	4.875– 5.00
No. 3 "	4.625–4.875 (2)	4.625–4.875 (2)
36-40 grav., Pittsburgh dist. prices excluded	4.375– 4.625	4.375– 4.625
CENTRAL MICHIGAN (FOB Central Mich. refinery group basis for shpt. within Mich.; shpts. may originate at plants outside Central group.)		
47-49 gravity w.w.	5.50 – 5.75	5.50 – 5.75
P.W. Distillate	5.50 – 5.65	5.50 – 5.65
No. 3 gas oil, Straw	5.00 – 5.25	5.00 – 5.25
U.G.I. gas oil	4.25 – 4.50	4.25 – 4.50
Fuel Oils (Vis. at 100):		
300-500 Vis.	3.75 (2)	3.50 – 3.75
100-300 Vis.	4.125 (1)	3.875–4.125 (2)
OHIO (S. O. Ohio quotations for statewide delivery)		
Kerosine	5.75	5.75
CALIFORNIA		
40-43 grav. w.w.	4.50 – 6.00	4.50 – 6.00
San Joaquin Valley:		
Heavy fuel	$0.575 –$0.65	$0.575 –$0.65
Light fuel	$0.65 –$0.75	$0.65 –$0.75
Diesel fuel	3.00 – 4.00	3.00 – 4.00
Stove dist.	3.00 – 5.00	3.00 – 5.00
Los Angeles:		
Heavy fuel	$0.55 –$0.65	$0.55 –$0.60
Light fuel	$0.65 –$0.75	$0.60 –$0.70
Diesel fuel	3.00 – 4.00	3.00 – 4.00
Stove dist.	3.00 – 4.00	3.00 – 4.00
San Francisco:		
Heavy fuel	$0.80	$0.80
Light fuel	$0.90	$0.90
Diesel fuel	4.50	4.50
Stove dist.	5.50	5.50

Note: All above heavy fuels meet Pacific specification 400; light fuel, spec. 300; Diesel fuels, spec. 200; and stove distillate, spec. 100.

Lubricating Oils

WESTERN PENNA.

Prices are given by Penna. refiners as their quotations to jobbing and compounding trade only. Prices to other refiners generally are lower.

Viscous Neutrals—No. 3 col. Vis. at 70° F.

200 Vis. (180 at 100°) 420-425 fl.		
0 p.t.	24.50 (1)	24.50 (1)
10 p.t.	23.50 (1)	23.50 (1)
15 p.t.	22.50 (1)	22.50 (1)
25 p.t.	21.00 –22.00	21.00 –22.00
150 Vis. (143 at 100) 400-405 fl.		
0 p.t.	22.50 (1)	22.50 (1)
10 p.t.	21.50 (1)	21.50 (1)
15 p.t.	20.50 (1)	20.50 (1)
25 p.t.	19.00 –20.00	19.00 –20.00
Cylinder Stocks		
Brt. stk., 145-155 vis. at 210°, 540-550 fl., No. 8 col.		
10 p.t.	16.50 (1)	16.50 (1)
15 p.t.	15.50 (1)	15.50 (1)
25 p.t.	14.00 –14.50	14.00 –14.50
600 S.R. filterable	9.00 (2)	9.00 (2)
650 S.R.	9.00 – 9.50	9.00 – 9.50
600fl	9.50–10.00	9.50–10.00
630fl	11.00 –12.00	11.00 –12.00
MID-CONTINENT (F.o.b. Tulsa)		
Neutral Oils (Vis. at 100° F. 0 to 10 P.P.)		
Pale Oils:		
Vis. Color		
60-85—No. 2	5.25 – 5.75	5.25 – 5.75
86-110—No. 2	5.25 – 6.25	5.25 – 6.25
150—No. 3	8.00 –10.25	8.00 –10.25
180—No. 3	8.50 –10.50	8.50 –10.50
200—No. 3	8.50 –11.00	8.50 –11.00
250—No. 3	10.00 –12.00	10.00 –12.00
280—No. 3	10.50 –13.75	10.50 –13.75
300—No. 3	11.50 –14.25	11.50 –14.25

Lubricating Oils (Cont'd)

Prices Effective	Mar. 3	Feb. 24
Red Oils:		
180—No. 5	8.50–9.50 (2)	8.50–9.50 (2)
200—No. 5	8.50–10.50 (2)	8.50–10.50 (2)
280—No. 5	12.50 (1)	12.50 (2)
300—No. 5	11.00 –12.50	11.00 –12.50

Note: Viscous Neutrals, 15-25 p.p. generally are quoted 0.5c under 0-10 p.p. oils. Non-viscous oils, 15-25 p.p., generally are quoted 0.25c under 0-10 p.p. oils.

Bright Stock—Vis. at 210°		
200 Vis. D	18.00 (1)	18.00 (1)
150-160 Vis. D:		
0 to 10 p.p.	13.50 –16.00	13.50 –16.00
10 to 25 p.p.	13.00 –15.50	13.00 –15.50
25 to 40 p.p.	12.50–15.00 (2)	12.50–15.00 (2)
150–160 vis. E	12.50 –15.00	12.50 –15.00
120 Vis. D:		
0 to 10 p.p.	12.50 –15.25	12.50 –15.25
25 to 40 p.p.	14.375 (1)	14.375 (1)
600 S.R. Dark Green	7.00 (2)	7.00 (2)
600 S.R. Olive Green	8.00 – 9.50	8.00 – 9.50
631 S.R.	12.00 (1)	12.00 (1)
Black Oil	4.00–5.50 (2)	4.00–5.50 (2)

SOUTH TEXAS Neutral Oils

Vis. Color		
Pale Oils: (*Vis. at 100°F*)		
100 No. 1½-2½	5.25 – 5.50	5.25 – 5.50
200 No. 2-3	7.25	7.25
300 No. 2-3	7.75	7.75
500 No. 2½-3½	8.50	8.50
750 No. 3-4	8.75	8.75
1200 No. 3-4	8.875	8.875
2000 No. 4	9.00	9.00
Red Oils:		
100 No. 5-6	5.25 –5.50(2)	
200 No. 5-6	7.25	7.25
300 No. 5-6	7.75	7.75
500 No. 5-6	8.50	8.50
750 No. 5-6	8.75	8.75
1200 No. 5-6	8.875	8.875
2000 No. 5-6	9.00	9.00

CHICAGO (From Mid-Continent p.l. crude.)

Neutral Oils (Vis. at 100° F. 0 to 10 p.p.)

Pale Oils		
Vis. Color		
60-85—No. 2	7.25 (1)	7.25 (1)
86-110—No. 2	7.25 (1)	7.25 (1)
150—No. 3	8.50 (1)	8.50 (1)
180—No. 3	9.50 (1)	9.50 (1)
200—No. 3	10.00 (1)	10.00 (1)
250—No. 3	11.00 (1)	11.00 (1)
Red Oils:		
180—No. 5	9.50 (1)	9.50 (1)
200—No. 5	9.50 (1)	9.50 (1)
250—No. 5	11.00 (1)	11.00 (1)
280—No. 5	12.00 (1)	12.00 (1)
300—No. 5	12.00 (1)	12.00 (1)

Note: Viscous oils, 15 to 30 p.p. are quoted 0.5c lower; 60-85 and 86-110 No. 2 non-viscous oils, 15 to 30 p.p., 0.25c lower.

Unfiltered Steam Refined: (Viscosity at 210°)		
140	8.75 (1)	8.75 (1)
160	9.50 (1)	9.50 (1)
200	10.50 (1)	10.50 (1)
Bright stocks, 160 vis. at 210, No. 8 color:		
0 to 10 p.p.	15.00 (1)	15.00 (1)
15 to 25 p.p.	14.00 (1)	14.00 (1)
30 to 40 p.p.	13.50 (1)	13.50 (1)
E filtered Cyl. Stock	12.50 (1)	12.50 (1)

Note: To obtain prices delivered in Chicago, add 0.25c per gal.

Natural Gasoline

(Group 3 & Breckenridge prices are to blenders on freight basis shown below. Shipments may originate in any Mid-Continent manufacturing district.)

FOB GROUP 3		
Grade 26-70	2.50 (Sales)	2.375 (Sales)
FOB BRECKENRIDGE		
Grade 26-70	2.25 (Sales)	2.00 (Qtns.)
CALIFORNIA (FOB plants in Los Angeles basin)		
75-85, 350-375 e.p. for blending	4.50 – 4.75	4.50 – 4.75

Naphtha and Solvent

Prices Effective	Mar. 3	Feb. 24
(FOB Group 3)		
Stoddard solvent	5.50 – 5.875	5.50 – 5.875
Cleaners' naphtha	6.00 – 6.375	6.00 – 6.375
V. M. & P. naphtha	6.00 – 6.375	6.00 – 6.375
Mineral spirits	5.00 – 5.375	5.00 – 5.375
Rubber solvent	6.00 – 6.375	6.00 – 6.375
Lacquer diluent	6.25 – 7.375	6.25 – 7.375
Benzol Diluent	7.875– 8.375	7.875– 8.375
WESTERN PENNA		
Untreated naphtha	5.50 – 5.75	5.50 – 5.75
Stoddard solvent	6.00	6.00

OHIO (S. O. Ohio quotations for statewide delivery):

V.M.&P. naphtha, D.C. naphtha, Special Varnolene, Varnolene & Sohio solvent	8.75	8.75
Rubber solvent	8.25	8.25

Wax

White Crude Scale:

WESTERN PENNA. (Bbls. C.L., N. Y.)		
122-124 A.m.p.	2.75 (2)	2.70 – 2.75
124-126 A.m.p.	2.75	2.65–2.75 (2)
OKLAHOMA (Bbls. or burlap bags, C.L.)		
124-6 AMP	2.50 (1)	2.50 (1)
131-3 AMP	3.25 (1)	3.25 (1)
CHICAGO (FOB Chicago district refinery of one refiner, in bags or slabs loose, carloads. Melting points are EMP (ASTM) methods: add 3° F. to convert into AMP.)		
Fully refined:		
122-124 (bags only)	5.60	5.60
125-127	5.60	5.60
127-129	5.85	5.85
130-132	6.15	6.15
132-134	6.40	6.40
135-137	7.15	7.15

Petrolatums

WESTERN PENNA. (Bbls., carloads; tank cars, 0.5c per lb. less.)		
Snow White	5.125– 6.125	5.125– 6.125
Lily White	4.375– 5.125	4.375– 5.125
Cream White	3.375– 4.125	3.375– 4.125
Light Amber	2.625– 3.25	2.625– 3.25
Amber	2.375– 2.875	2.375– 2.875
Red	2.125– 2.625	2.125– 2.625

Group 3 Freight Rates

To Division Headquarters Points of Standard Oil Co. of Indiana

	Gasoline Kerosine Cents per Cwt.	Cents per gal. 6.6 lbs.	Distillate-Gas Oil-Fuel Oil Cents per Cwt.	Cents per gal. 7.4 lbs.
Chicago, Ill.	40	2.640	32	2.368
Decatur, Ill.	39	2.574	31	2.294
Joliet, Ill.	40	2.640	32	2.368
Peoria, Ill.	39	2.574	31	2.294
Quincy, Ill.	36	2.376	29	2.146
Indianapolis, Ind.	48	3.168	39	2.886
Evansville, Ind.	46	3.036	37	2.738
South Bend, Ind.	49	3.234	**42	**3.108
Detroit, Mich.	64	4.224	51	3.774
Grand Rapids, Mich.	58.5	3.861	**50	**3.700
Saginaw, Mich.	66	4.356	53	3.922
Green Bay, Wis.	51	3.366	41	3.034
Milwaukee, Wis.	43	2.838	34.5	2.553
LaCrosse, Wis.	46	3.036	37	2.738
Minneapolis-St. Paul	46	3.036	37	2.738
Duluth, Minn.	52	3.432	41.5	3.071
Mankato, Minn.	46	3.036	37	2.738
Des Moines, Ia.	36	2.376	29	2.146
Davenport, Ia.	39	2.574	31	2.294
Mason City, Ia.	42	2.772	33.5	2.479
St. Louis, Mo.	33	2.178	26.5	1.961
Kansas City, Mo.	28	1.848	22.5	1.665
St. Joseph, Mo.	28	1.848	22.5	1.665
Fargo, N. D.	63	4.158	50.5	3.737
Minot, N. D.	83	5.478	66.5	4.921
Huron, S. D.	53	3.498	42.5	3.145
Wichita				
From Ponca City	7.5	*0.495	7.5	†0.555
From Tulsa	12.5	*0.825	12.5	†0.925
From Cushing	11	*0.726	11	†0.814

*This rate also includes distillate rate at 6.6 lbs. per gal.

**This rate applies only to residual fuel and gas oil.

†This rate is exclusive of distillate which is based on 6.6 lbs. per gal. from Ponca City, Tulsa and Cushing, Okla., to Wichita. Includes only gas oil and fuel oil.

NOTE: There is no Group 3 rate to Wichita, Kans.

SEABOARD PRICES EXPORT AND COASTWISE

(NOTE—Parenthetical figures after prices indicate number of companies quoting when less than three companies are quoting.)

Atlantic Coast

(Prices are of refiners, FOB their refineries & their tanker terminals, & of tanker terminal operators, FOB their terminals)—Prices Effective Mar. 3

MOTOR GASOLINE

District:	Min. 80 Oct. '39 Research (Max. 2 cc. Lead)	72-74 Oct. (ASTM)	68-70 Oct. (ASTM)	65-66 Oct. (ASTM)	60-64 Oct. (ASTM)
N. Y. Harb.	5.75 – 6.50	5.50 – 6.80	5.50	5.50 (2)	....
N. Y. Harb., barges	5.75 – 7.00	5.25 – 5.50	5.25 (2)	5.25–5.50 (2)	....
Albany	5.70 (1)	6.30	....	....	....
Philadelphia	5.75 – 7.25	5.50 – 7.00	5.50 – 6.75	....	6.50 (1)
Baltimore	5.75 – 7.25	5.50 – 6.75	5.50 – 6.00	5.50 (1)	....
Norfolk	5.75 – 7.25	5.50 – 6.75	6.00 – 6.50	5.50 (1)	....
Wilm'ton	6.00 – 7.05	5.75 – 6.55	6.00 – 6.50	5.50 (1)	....
Char'ston	6.25 – 7.05	5.75–6.60 (2)	5.875–6.50 (2)	5.50 (1)	....
Savannah	6.125– 6.50	6.00	5.875– 6.125	....	5.875 (1)
Jacksonville	6.125– 6.50	6.00	5.875– 6.25	....	5.875 (1)
Miami	6.25–6.50 (1)	6.00 (1)	5.875–6.00 (2)	....	....
Tampa	6.25–6.50 (2)	6.00 (1)	5.875– 6.25	....	....
Pensacola	5.75–6.00 (1)	....	5.50–5.75 (1)	....	....
Mobile	5.75–6.00 (2)	5.50 (1)	5.375–5.625 (2)	....	....
Portland	5.70 (2)	6.40	6.40(1)	....	....
Boston	5.70 (2)	5.50 – 6.40	5.50 (1)	5.50–6.15 (2)	....
Providence	5.60 – 6.50	6.40	....	....	....

FUEL OILS

	KEROSINE and/or NO. 1 FUEL	No. 2	No. 3	No. 5	No. 6
N. Y. Harb.	4.60	4.00	4.00	$1.55	$1.25
N. Y. Harb., barges	4.50	3.90	3.90	....	....
Albany	5.10 – 5.30	4.40–4.70	4.40 (1)	$1.85 (1)	$1.45 (1)
Philadelphia	4.75 – 5.25	4.25	4.25	$1.37 –$1.47	$1.25
Baltimore	4.75 – 5.10	4.25	4.25	$1.47 (1)	$1.25
Norfolk	4.75 – 5.25	4.25	4.25	.....	$1.25 (2)
Wilmington	4.75 – 5.25	4.25	....	.....	....
Charleston	4.75 – 5.25	4.25 (2)	....	.....	$1.20 (2)
Savannah	5.125–5.50	....	....	.....	$1.20 (1)
Jacksonville	5.125–5.50	4.75 (1)	4.75 (1)	.....	$1.20 (1)
Miami	5.125–5.25 (2)	....	....	.....	....
Tampa	5.125–5.25	4.75 (1)	....	.....	$1.15 (1)
Pensacola	4.875–5.00 (1)	....	....	.....	.....
Mobile	4.875 –5.125	....	....	.....	.....
Portland	5.00 –5.20	4.40 –4.70	4.40	$1.85 (1)	$1.25 –$1.45
Boston	4.90 –5.10	4.30 –4.60	4.30	$1.55 (2)	$1.25
Providence	4.90 –5.10	4.30 –4.60	4.30	$1.50 –$1.55	$1.25

	Bunker C Fuel Ships' bunkers (Ex Lighterage)	Diesel Oil Ships' bunkers (Ex Lighterage)	Diesel Oil Shore Plants	Gas House Gas Oil 28-34 Gravity
N. Y. Harbor	$1.25	$1.65 –1.75	4.30	4.40
Albany	$1.45 (1)	$1.85	4.40	4.50
Philadelphia	$1.25	$1.75	....	....
Baltimore	$1.25	$1.75 –1.85	4.25	4.25
Norfolk	$1.25	$1.75 –1.85	4.25	4.25
Charleston	$1.20	$1.75 –1.85	4.25	4.25
Savannah	$1.20 (1)	$1.95 –$1.995	....	....
Jacksonville	$1.20	$1.95 –$1.995	....	....
Tampa	$1.15	$1.95 –$1.995	....	....
Portland	$1.25 –$1.45	$1.75 –$2.05	4.40	4.50
Boston	$1.25	$1.65 –$1.85	4.30	4.40
Providence	$1.25	$1.65 –$1.95	4.30	4.40

New York Export Lubes

(Penna. Products in bbls. FAS New York)

Prices Effective	Mar. 3	Feb. 24
Bright stock:		
Light, 25 p.t.	22.00 (1)	22.00 (1)
Neutral oil:		
150 3 color, 25 p.t.	25.50 (1)	25.50 (1)
600 s.r., unfilt.	18.00 (1)	18.00 (1)
650 s.r., unfilt.	18.25 (1)	18.25 (1)
600 fl. s.r.	18.50 (1)	18.50 (1)
630 fl., s.r.	20.00 (1)	20.00 (1)

Wax

(Melting points are AMP. 3° higher than EMP. Export prices FAS c.l. Domestic prices FOB, in bags, c.l. Scale solid; fully refined slabs.)

Prices Effective Mar. 3

	New Orleans Export	N. Y. Domestic	N. Y. Export
Crude Scale:			
124–6 Yellow	2.75 (1)	....	2.75 (1)
122–4 White	....	2.75	2.75
124–6 White	2.50–2.75 (2)	2.75–2.85	2.75
Fully Refined:			
123-5	....	5.60 (a)	5.60 (2)
125-7	5.60(1)	5.60 (a)	5.60
128-30	6.15(1)	5.60–5.70	5.60
130-2	6.15 (1)	5.85	5.85
133-5	6.40 (1)	6.15	6.15
135-7	7.15(1)	6.40(2)	6.40
108-11 White Match wax (tight bbls.)			3.25 (1)

Naphtha

Prices Effective Mar. 3	V.M.&P. Naphtha	Mineral Spirits
Baltimore	9.50	8.00
New York Harbor	9.00 – 9.50	8.00 – 8.50
Philadelphia district	10.00	8.00 – 9.00
Boston	9.00	8.75 – 9.25
Providence	9.00	8.75

Pacific Export

(Quotations at seaboard, Los Angeles, cargo lots, except where otherwise noted.)

Prices Effective	Mar. 3	Feb. 24
375 e.p. blend, 70 oct.	4.75 –5.125	4.50 – 5.25
390 e.p. blend, 68 oct.	4.625–5.00	4.375– 4.75
390 e.p. blend, 66 oct.	4.50 –4.875	4.375– 4.625
400 e.p. blend, 65 oct. min.	4.375 –4.75	4.25 – 4.375
U. S. Motor, under 65 octane	4.25 –4.625	4.125– 4.25
38-40 grav. w.w. kero., 150 fire point	4.50 –5.00	4.50 – 5.00
41-43 grav., w.w. kero.	4.75 – 5.00	4.75 – 5.00
44 grav., w.w. kero.	5.00 – 5.50	5.00 – 5.50
Diesel fuel, 24 & above	$1.25 –$1.30	$1.25 –$1.30
Diesel fuel, under 24	$1.15 –$1.25	$1.15 –$1.25
30-34 grav. diesel (gas oil) Pac. Spec. 200	$1.25 –$1.35	$1.25 –$1.35
Grade C fuel, Pac. Spec. 400	$0.625–$0.75	$0.625–$0.75
In Ship's Bunkers, or deep tank lots:		
Diesel fuel, Pac. Spec. 200	$1.35 –$1.45	$1.35 –$1.45
Grade C fuel, Pac. Spec. 400	$0.70 –$0.75	$0.70 –$0.75

Pacific Export (Cont'd)

Prices Effective	Mar. 3	Feb. 24
Cased Goods: (Per case)		
U. S. Motor	$1.35 –$1.45	$1.35 –$1.45
375-400 e.p. blend, 65 oct. & above	$1.50 –$1.60	$1.50 –$1.60
400 e.p. blend, under 65 oct.	$1.40 –$1.50	$1.40 –$1.50
40-43 grav. w.w. kero., 150 fire point	$1.30 –$1.40	$1.30 –$1.40
Kero., p.w.	$1.25 –$1.35	$1.25 –$1.35

Tanker Rates

(Approximate rates. Cents per bbl.)

Gulf-N. Atlantic: (not E. of N.Y.)	Last Paid	Owners Ask
Hvy. Crude & fuel (10 to 19.9 gravity)	45	..
Light Crude, (30 grav. or Lighter)	(a)	..
Gasoline	36	..
Kerosine	38	..
No. 2 Fuel	40	..

(a) No rate for light crude in last "dirty" fixture.

Gulf Coast

(Prices for sales made or firm offers reliably reported for sales pending in cargoes FOB ship at Gulf, for minimum of 20,000 bbls. Prices are by refiners only to other refiners, export agents, or to large tanker terminal operators at the customary trade specifications noted.)

Prices Effective Mar. 3

Motor Gasoline Domestic	
Min. 80 oct. '39 Research, max. 2cc lead	4.75 –5.375
60-62, Gravity, Max. 400 e.p.	
72-74 oct. leaded (ASTM)	4.25 – 5.25
70 oct. unleaded "	4.625
68 oct. " "	4.50
65 oct. " "	4.00 – 4.25
60 oct. " "	4.00 – 4.125
41-43 w.w. kerosine	3.375 –3.625
No. 2 fuel	3.00 – 3.25
Gas Oil—Less than ½ of 1% sulfur.	
Below 43 diesel index	3.125– 3.25
43-47 " "	3.125– 3.25
48-52 " "	3.125– 3.625
53-57 " "	3.50
58 & above diesel index	3.75
Diesel Oil, ships' bunkers (ex-lighterage)	$1.40 –$1.70
Bunker C, " " "	$0.80 –$0.85
Bunker C, cargoes	$0.75 –$0.85
Motor Gasoline Export	
60-62 Gravity, Max. 400 e.p.	
72-74 oct. leaded (ASTM)	4.25 – 5.25
70 oct. unleaded "	4.625
68 oct. " "	4.50
65 oct. " "	4.00 – 4.25
60 oct. " "	4.00 – 4.125
61-63 Gravity, Max. 390 e.p.	
72-74 oct. leaded (ASTM)	4.25 – 4.50
60 oct. unleaded "	4.00 – 4.125
64-66 Gravity, Max. 375 e.p.	
72-74 oct. leaded (ASTM)	4.25 – 4.50
60 oct. unleaded "	4.00 – 4.125
41-43 w.w. kerosine	3.375– 3.625
Gas Oil—Less than ½ of 1% sulfur.	
Below 43 diesel index	3.125– 3.25
43-47 " "	3.125– 3.25
48-52 " "	3.125– 3.625
53-57 " "	3.50
58 & above diesel index	3.75

MID-CONTINENT LUBES

(At Gulf; in packages, FAS.; in bulk FOB terminals)

Mar. 3

	New Steel Drums	Bulk
200 vis. D. 210 brt. stock	25.50 –25.80 (2)	19.80 (2)
150 vis. D 210 brt. stock 0-10 p.p.	21.50–21.80 (2)	15.80 (2)
10-25 p.p.	21.00 (1)	15.30 (1)
100 vis. D 210 brt. stock 0-10 p.p.	21.00 (1)	15.30 (1)
10-25 p.p.	20.50 (1)	14.80 (1)
200 vis. No. 3 col. neutral: 0-10 p.p.	17.00 (1)	11.30 (1)

SOUTH TEXAS LUBES

(Vis. at 100°, c. t. 0, blk exprt. shp., FOB terminals)

Unfiltered Pale Oils: Vis. Color	Mar. 3	Feb. 24
100 No. 3	6.00	6.00
200 No. 3	7.50	7.50
300 No. 3	8.00	8.00
500 No. 3½	9.00	9.00
750 No. 4	9.50	9.50
1200 No. 4	10.00	10.00
2000 No. 4	10.25	10.25
Red Oils: Vis. Color		
100 No. 5-6	6.00	6.00
200 No. 5-6	7.50	7.50
300 No. 5-6	8.00	8.00
500 No. 5-6	9.00	9.00
750 No. 5-6	9.50	9.50
1200 No. 5-6	10.00	10.00
2000 No. 5-6	10.25	10.25

(a) 0.4c discount generally given for slabs loose.

TANK WAGON PRICES

Commercial or consumer tank car, tank wagon, dealer, and service station prices for gasoline **do not include taxes;** *they do, however, include inspection fees as shown in general footnote. Gasoline taxes, shown in separate column, include 1.5c federal, and state taxes; also city and county taxes as indicated in footnotes. Kerosine tank wagon prices also do not include taxes; kerosine taxes where levied are indicated in footnotes. Dealer discounts are shown in footnotes; for commercial consumer discounts, see NPN for Feb. 21, 1940.*

These prices in effect Mar. 3, 1941 as posted by principal marketing companies at their headquarters offices, but subject to later correction.

S. O. New Jersey

Esso (*Regular Grade*)

	Consumer Tank Car	Dealer T.W.	Gaso-line Taxes	Kero-sine T.W.
*Atlantic City, N. J.	6.5	8.1	4.5	7.5
*Newark, N. J.	6.5	8.1	4.5	7.5
Annapolis, Md.	7.35	8.85	5.5	9.5
Baltimore, Md.	6.75	8.25	5.5	8.4
Cumberland, Md.	8.15	9.65	5.5	10
Washington, D. C.	7	8.5	3.5	9.5
Danville, Va.	7.95	10.45	6.5	9
Norfolk, Va.	6.75	9.25	6.5	10.5
Petersburg, Va.	7.05	9.55	6.5	11.2
Richmond, Va.	7.05	9.55	6.5	11
Roanoke, Va.	8.25	10.75	6.5	10
Charleston, W. Va.	7.55	10.05	6.5	11.5
Parkersburg, W. Va.	6.85	9.35	6.5	11.2
Wheeling, W. Va.	7.85	10.35	6.5	11.8
Charlotte, N. C.	8.9	9	7.5	9.8
Hickory	9.45	10.95	7.5	9.7
Mt. Airy, N. C.	9.3	8.5	7.5	10.6
Raleigh, N. C.	8.65	9.5	7.5	9.9
Salisbury, N. C.	8.95	8	7.5	10.3
Charleston, S. C.	6.75	9.25	7.5	....
Columbia, S. C.	7.6	10.1	7.5	....
Spartanburg, S. C.	8.3	10.8	7.5	12

	Mineral Spirits T.W.	V.M.&P. T.W.
Newark, N. J.	10.5	14.5
Baltimore, Md.	15	....
Washington, D. C.	15	....

Fuel Oils—T.W.	No. 1	No. 2	No. 3
Atlantic City, N. J.	7.5	6	6
Newark	7.5	6	6
Annapolis, Md.	....	6.5	....
Baltimore	7.4	6.25	5.75
Washington, D. C.	7.6	6.75	6.75
Norfolk, Va.	7.3	6.3	6.3
Petersburg	7.5	6.5	....
Richmond	7.5	6.5	6.5
Charlotte, N. C.	8.8	7.8	....
Hickory	....	7.25	....
Raleigh	8.9	7.5	....
Charleston, S. C.	....	6.6	....
Columbia	....	7.5	....
Spartanburg	9.8	8	....

*Effective Sept. 19, 1940, minimum retail resale price of 10.4c posted thru New Jersey.

Discounts:

Esso gasoline—to undivided dealers, 0.5c off dealer t.w. price, thru territory, except New Jersey. While above posted prices continue at Atlantic City and Newark, dealers will pay net price of 7.5c per gal. for Esso: dealers having pumps marked only Esso, Esso Extra and Standard White gasoline will pay 7c per gal. for Esso.

Kerosine—1c off t.w. price for 25 gals. or more, under contract thru territory (Baltimore city contract not necessary) except no discount in state of New Jersey.

Naphthas—To buyers taking following quantities at one time: Newark, 2c per gal. on 200 gals. or more, less than 200 gals. 0.5c higher price; Baltimore, 2c off on 25 to 100 gals. and 3c on over 100 gals.; Washington, 2c off to contract buyers.

Socony-Vacuum Oil Co., Inc.

Socony Mobilgas (*Regular Grade*)

	Com. T.C.	Com. Cons. T.W.	Undiv. Dlr. T.W.	Gaso-line Taxes
New York City:				
Manhattan & Bronx	7.0	6.7	7.2	*5.5
Kings & Queens	7.0	6.7	7.2	*5.5
Richmond	7.0	6.7	7.2	*5.5
Albany, N. Y.	7.2	6.9	6.5	5.5
Binghamton, N. Y.	8.3	8	8.5	5.5
Buffalo, N. Y.	7.8	7.5	8	5.5
Jamestown, N. Y.	7.8	7.5	8	5.5
Plattsburg, N. Y.	8.2	7.9	8.4	5.5
Rochester, N. Y.	8	7.7	8.2	5.5
Syracuse, N. Y.	7.3	7	5.2	5.5
Bridgeport, Conn.	6.6	6.3	6.8	4.5
Danbury, Conn.	7.4	7.1	7.6	4.5
Hartford, Conn.	6.8	6.5	7	4.5
New Haven, Conn.	6.6	6.3	6.8	4.5
Bangor, Me.	7.1	6.8	8.2	5.5
Portland, Me.	6.7	6.4	7.2	5.5
Boston, Mass.	6.4	6.1	6.9	4.5
Concord, N. H.	8.3	8	8.5	5.5
Lancaster, N. H.	9.2	8.9	9.4	5.5
Manchester, N. H.	7.9	6.8	7.3	5.5
Providence, R. I.	6.4	6.4	7.4	4.5
Burlington, Vt.	6.3	6	6.5	5.5
Rutland, Vt.	7.8	7.5	8	5.5

	Mineral Spirits T.W.	V.M.&P. T.W.
Buffalo, N. Y.	9.6	10.3
†New York City	8.5	9.2
Rochester, N. Y.	10.5	11.2
Syracuse, N. Y.	11.3	....
Boston, Mass.	11	11
Bridgeport, Conn.	11.5	12
Hartford, Conn.	11	11.5
Providence, R. I.	11	12

	Kero-sine Yard	Kero-sine T.W.	Mobil-fuel Diesel TC	Mobil-fuel Diesel T.W.	Mobil-heat Fuel Yard	Mobil-heat Fuel T.W.
New York:						
Manhat'n & Bronx	....	7.3	....	6.5	....	6
Kings & Queens	4.8	7.3	....	6.5	4.2	6
Richmond	4.9	7.5	....	6.5	4.3	6.3
Albany	5.3	7.3	4.9	6.6	4.5	6.3
Binghamton	7	9	....	....	6.3	7.8
Buffalo	6.2	8	5.9	7.9	5.7	7.4
Jamestown	5.9	8	....	....	5.9	7
Plattsburg	5.9	7.9	....	....	5.2	6.7
Rochester	6.7	8.7	....	....	5.9	7.4
Syracuse	6.6	8.6	....	....	6	7.5
Conn.:						
Bridgeport	5.4	7.3	....	....	4.6	5.7
Danbury	5.9	7.8	....	....	5.1	6.2
Hartford	5	6.8	....	6.4	4.4	6.2
New Haven	4.8	7.2	....	....	4.2	5.8
Maine:						
Bangor	5.6	7.6	....	....	5	6.5
Portland	5.4	7.5	4.8	6.8	4.8	6.3
Mass.:						
Boston	5.3	7.6	4.7	6.7	4.7	6.3
N. H.:						
Concord	6.1	8.1	....	....	5.8	7.3
Lancaster	7.2	9.2	....	....	6.8	8.3
Manchester	6.2	8.5	....	....	5.5	7
R. I.:						
Providence	5.3	7.4	4.7	6.7	4.7	6.2
Vermont:						
Burlington	5.9	7.9	....	....	5.1	6.5
Rutland	6.1	8.1	....	....	5.3	6.8

*Plus 2% city sales tax computed at time of each sale.

†Prices apply to consumers only in quantities over 1000 gals. annually; for quantities under 1000 gals. annually, add 0.5c per gal.

Discounts: Gasoline—To undivided dealers, 0.5c less than divided dealer t.w. Diesel—On t.w. deliveries, 0.5c for at least 400 gals.; 1c for full tank truck.

Atlantic Refining

Atlantic White Flash Gasoline (*Regular Grade*)

	Commer-cial T.C.	Dealer T.W.	Gaso-line Taxes	Kero-sine T.W.
Philadelphia, Pa.	7	8	5.5	9.5
Pittsburgh	7.5	9.5	5.5	10.5
Allentown	7.5	9	5.5	10.5
Erie	7	9.5	5.5	10
Scranton	7.5	9	5.5	10.5
Altoona	7.5	9.5	5.5	10.5
Emporium	7.5	9.5	5.5	10.5
Indiana	7.5	9.5	5.5	10.5
Uniontown	7.5	9.5	5.5	10.5
Harrisburg	7.5	9	5.5	10.5
Williamsport	7.5	9	5.5	10
Dover, Del.	....	8.5	5.5	10.5
Wilmington, Del.	....	8	5.5	10
Boston, Mass.	....	7.4	4.5	8.1
Springfield, Mass.	....	7.2	4.5	8.8
Worcester, Mass.	....	7.5	4.5	8
Fall River, Mass.	....	7.9	4.5	8.3
Hartford, Conn.	....	7.5	4.5	8
New Haven, Conn.	....	7.3	4.5	8.6
Providence, R. I.	....	7.9	4.5	8.3
Atlantic City, N. J.	....	7.5	4.5	7.5
Camden, N. J.	....	7.5	4.5	7.5
Trenton, N. J.	....	7.3	4.5	7.5
Annapolis, Md.	....	8.85	5.5	8.4
Baltimore, Md.	....	8.25	5.5	7.4
Hagerstown, Md.	....	9.35	5.5	7.6
Richmond, Va.	....	9.55	6.5	11
Wilmington, N. C.	....	9.35	7.5	9.2
Brunswick, Ga.	....	7.5	7.5	*9
Jacksonville, Fla.	....	7.5	8.5	10

	Mineral Spirits T.W.†	V.M.&P. T.W.†
Philadelphia, Pa.	12	14.5
Lancaster, Pa.	13.5	16
Pittsburgh, Pa.	14.5	14.5

Fuel Oils—T.W.	1	2	3	5	6
Phila., Pa.	7.5	6	6	4.25	3.50
Allentown, Pa.	8.5	6.5	6.5	....	....
Wilmington, Del.	8.00	6	6	....	....
Springfield, Mass.	8.8	6.7	6.7	....	....
Worcester, Mass.	8	7	7	....	....
Hartford, Conn.	8	6.5	6.5	....	....

*Does not include 1c Georgia kerosine tax.

†Mineral Spirits prices also apply to Stoddard Solvent; V.M.&P. prices also apply to Light Cleaners Naphtha.

Discounts:

Gasoline—to undivided dealers, 0.5c off dealer t.w., except Georgia & Florida dealer t.w. and undivided dealer t.w. prices are same.

Kerosine—Thru Penna. & Delaware, 2c off t.w. price on t.w. deliveries of 25 gals. or more at one time.

Naphthas—Philadelphia, 200 gals. or more at one time, 2c off, Lancaster, contract buyers taking 1000 gals. or more per year, one drum up, 2c off; non-contract buyers, 200 gals. or more at one time, 2c off. Pittsburgh, 500 gals. or more at one time, 2c off.

S. O. Ohio††

***Sohio X-70 Gasoline (*Regular Grade*)**

	Con-sumer T.W.	**Re-sel-lers	‡S.S.	Gaso-line Taxes	†Kero-sine T.W.
Ohio, Statewide	10.5	9	12.5	5.5	8
Akron	10.5	7.5	9.5	5.5	8
Cincinnati	10.5	7.5	10	5.5	8
Cleveland	10.5	8	11	5.5	8
Columbus	10.5	8	11	5.5	8
Dayton	10.5	7	9.5	5.5	8
Marietta	10.5	8	10.5	5.5	8
Portsmouth	10.5	8.5	11.5	5.5	8
Toledo	10.5	7.5	10	5.5	8
Youngstown	10.5	8	11	5.5	7.5

Aviation Gasoline—Statewide

	Consumer T.W.	Gasoline Taxes
Sohio Aviation	14.5	5.5
Esso Ethyl Aviation 74 Oct.	15.5	5.5
Esso Ethyl Aviation 80 Oct.	16.5	5.5
Esso Ethyl Aviation 87 Oct.	17.5	5.5
Esso Ethyl Aviation 90 Oct.	17.5	5.5
Esso Ethyl Aviation 100 Oct.	24.5	5.5

	†Naphthas—T.W. State-wide	Lucas County
S.R. Solvent	12.75	12.75
D.C. Naphtha	13.25	13
V.M.&P. Naphtha	13.25	13
Varnolene	13.25	13
Sohio Solvent	13.25	13

Fuel Oils—T.W.	No. 1	No. 2	No. 3	No. 4
Ohio, Statewide	8.0	8.0	7.5	....
Toledo	7.5	7.5	7.0	....
Cleveland	9.5	9.5	9.0	6.75

*Renown (third-grade) prices are same as X-70 unless otherwise noted.

**Except authorized agents.

†Kerosine prices are ex 1c state tax. Naphtha prices are ex 1.5c federal & 4c state tax.

‡Prices at company-operated stations.

††Statewide prices are subject to exceptions other than those shown.

Discounts:

Esso aviation—on contract to hangar operators and resellers, 2c off consumer t.w.

Fuel Oils—Statewide and Toledo prices are for t.w. deliveries of less than 50 gals.; t.w. and drum deliveries of over 50 gals. are 0.5c less. Cleveland Nos. 1, 2, and 3 prices are for bulk deliveries of 5 to 99 gals.; 100 gals. and over are 2c less. Cleveland No. 4 price is for full compartment hose dump only.

Naphthas—to contract consumers off t.w. prices—Statewide: 300 to 999 gals., 0.5c; 1000 to 2499 gals., 0.75c; 2500 to 4999 gals., 1c; 5000 or more gals., 1.5c. Lucas County: Less than 50 gals., tank wagon price; 50 to 249 gals., 0.5c; 250 to 499 gals., 1c; 500 gals. or over, 1.5c.

S. O. Kentucky

Crown Gasoline (*Regular*)

Standard (*Third Grade*)

	†Net Dealer Crown	Standard	Gaso-line Taxes	Kero-sine T.W.
Covington, Ky.	7	6.5	6.5	9
Lexington, Ky.	9	7	6.5	9
Louisville, Ky.	8.5	6.5	6.5	8.5
Paducah, Ky.	6	5.5	6.5	8.5
Jackson, Miss.	6.5	4.5	7.5	*8.5
Vicksburg, Miss.	8	7	7.5	*8
Birmingham, Ala.	8	7	*8.5	8
Mobile, Ala.	6	5	*9.5	8
Montgomery, Ala.	8.5	7.5	*9.5	*9
Atlanta, Ga.	7.5	6.5	7.5	*8
Augusta, Ga.	9	8	7.5	*8.5
Macon, Ga.	8.5	7.5	7.5	*8
Savannah, Ga.	8	7	7.5	*8
Jacksonville, Fla.	7.5	6.5	8.5	8
Miami, Fla.	7.5	6.5	8.5	8
Pensacola, Fla.	7.5	6.5	*9.5	8
Tampa, Fla.	7.5	6.5	8.5	8

*Taxes: In tax column are included these city and county gasoline taxes: Mobile, 2c city; Birmingham 1c city; Montgomery, 1c city and 1c county; Pensacola, 1c city. Georgia and Montgomery, Ala. have 1c kerosine tax, Mississippi 0.5c, not included in above prices.

†Consumer t.w. prices are same as net dealer prices.

S. O. Indiana

Red Crown (*Regular Grade*)

Stanolind (*Third Grade*)

	Red Crown Cons. T.W.	Dealer Prices Red Crown	Stano-lind	Gaso-line Taxes	Kero-sine T.W.
Chicago, Ill.	10.1	8.1	6.4	4.5	10
Decatur, Ill.	10.1	8.6	6.2	4.5	8.5
Joliet, Ill.	11.1	9.6	6.7	4.5	10
Peoria, Ill.	11.1	8.7	8.1	4.5	10
Quincy, Ill.	10.9	9.4	8.1	4.5	9.8
Indianapolis, Ind.	11.3	9.3	8.9	5.5	*10
Evansville, Ind.	11.1	9.6	8	5.5	*9.8

(Continued on next page)

TANK WAGON PRICES

Commercial or consumer tank car, tank wagon, dealer, and service station prices for gasoline **do not include taxes:** *they do, however, include inspection fees as shown in general footnote. Gasoline taxes, shown in separate column, include 1.5c federal, and state taxes; also city and county taxes as indicated in footnotes. Kerosine tank wagon prices also do not include taxes; kerosine taxes where levied are indicated in footnotes. Dealer discounts are shown in footnotes; for commercial consumer discounts, see NPN for Feb. 21, 1940.*

These prices in effect Mar. 3, 1941 as posted by principal marketing companies at their headquarters offices, but subject to later correction.

S. O. Indiana (Cont'd)

Red Crown (*Regular Grade*)
Stanolind (*Third Grade*)

	Red Crown Cons. T.W.	Dealer Prices Red Crown	Stanolind	Gasoline Taxes	Kerosine T.W.
South Bend, Ind.	11.5	9.8	8.8	5.5	*10
Detroit, Mich.	9.6	8.1	7.1	4.5	8.1
Grand Rapids, Mich.	9.8	8.3	8	4.5	9.1
Saginaw, Mich.	10.4	8.9	8.4	4.5	9.1
Green Bay, Wis.	11.9	10.4	7.5	5.5	10.8
Milwaukee, Wis.	11.3	9.8	9.3	5.5	10.2
La Crosse, Wis.	11.5	10	9.5	5.5	10.4
Minneapolis-St. Paul	11.5	9.7	7.3	4.5	10.4
Duluth, Minn.	11.9	10.4	9.9	4.5	10.8
Mankato, Minn.	11.5	10	8.5	4.5	9.5
Des Moines, Ia.	10.9	9.4	7.9	4.5	*9.8
Davenport, Ia.	11.1	9.6	9.1	4.5	*10.
Mason City, Ia.	11.3	9.8	6.9	4.5	*10.2
St. Louis, Mo.	10.2	8.7	7	*4.5	9.6
Kansas City, Mo.	10.4	7.4	6.4	*4.5	8.6
St. Joseph, Mo.	10.4	8.5	7.5	*4.5	8.4
Fargo, N. D.	12.7	11.2	9	5.5	11.6
Huron, S. D.	12	10.5	10	5.5	10.9
Wichita, Kans.	9.3	7.8	5.5	4.5	7.2

Stanavo Aviation 73 Octane

Chicago, Ill.	14.9	
Detroit, Mich.	16.5	4.5
Milwaukee, Wis.	15.1	5.5
Minneapolis, Minn.	15.3	4.5
St. Louis, Mo.	14.5	*4.5
Kansas City, Mo.	14.1	*4.5
Fargo, N. D.	16.5	5.5
Huron, S. D.	15.8	5.5

	Oleum Spirits	V.M.&P. Naphtha	Stanisol	*Taxes
(Prices are base prices before discounts)				
Chicago	12.7	13	12.4	4.5
Detroit	15.2	14.2	15.7	4.5
K. C., Mo.	12.8	13.8	13.3	1.5
St. Louis	13.2	14.2	12.4	1.5
Milwaukee	13.8	11.8	14.3	5.5
Minneap'lis	14	15	12.7	4.5

	Fuel Oils T.W. Standard Heater Oil Chicago:
1-99 gals.	9
100-149 gals.	8
150 gals. & over	7.5

	Stanolex No. 1	Stanolex Furnace Oil
1-99 gals.	8.5	8.5
100-399 gals.	7.5	7.5
400 gals. & over	7	7

	Stanolex Fuel Oil A	Stanolex Fuel Oil B
1-399 gals.	6	6
400-799 gals.	5	5
800 gals. & over	4.75	4.75

	Stanolex Bunker C Fuel Oil
1-999 gals.	[illegible]
1000 gals. & over	3.75

Other Points:	Stanolex No. 1	Stanolex Furnace Oil
Indianapolis		
1-99 gals.	...	*8.5
100 gals. & over	...	*7.5
Detroit		
1-99 gals.	...	7.6
100 gals. & over	...	6.6
Milwaukee		
1-99 gals.	8.2	8.7
100 gals. & over	8.2	7.7
Minneapolis		
1-99 gals.	8.2	8.2
100 gals. & over	...	7.2
100-199 gals.	7.7	...
200 gals. & over	7.2	...
St. Louis		
1-99 gals.	8	7.5
100 gals. & over	7	6.5
Kansas City		
1-49 gals.	7.8	...
50 gals. & over	6.8	...
1-99 gals.	...	7.8
100 gals. & over	...	6.8

***Taxes:** In gasoline tax column are included these city taxes—Kansas City, St. Joseph, and St. Louis, 1c. Indiana kerosine and fuel oil prices are ex 4c state tax; Iowa kerosine prices are ex 3c state tax. In naphtha tax column are included 1.5c federal tax and state taxes.

†Prices for small-lot deliveries range up to 2c higher than above prices.

S. O. Nebraska

Standard Red Crown Gasoline
(Regular Grade)

	T.W. Dealer	Gasoline Taxes	Kerosine T.W.
Omaha	10.9 9.4	6.5	9.8
McCook	11 7.9	6.5	9.5
Norfolk	11 9.4	6.5	9.9
North Platte	11.3 9.5	6.5	10.2
Scottsbluff	11.4 8.5	6.5	10.8

S. O. Louisiana

Esso Gasoline (*Regular Grade*)

	Consumer Tank Car	Dealer T.W.	Gasoline Taxes	Kerosine T.W.
New Orleans, La.	5.75	8.25	8.5	*9
Baton Rouge, La.	6.25	8.75	8.5	*9.5
Alexandria, La.	6.25	8.75	8.5	*9.5
Lafayette, La.	6.5	9	8.5	*9
Lake Charles, La.	6.25	8.75	8.5	*9
Shreveport, La.	5.5	8	8.5	*9
Knoxville, Tenn.	9.5	11.5	8.5	12.5
Memphis, Tenn.	7.5	9.5	8.5	11
Chattanooga, Tenn.	9	8.85	8.5	11
Nashville, Tenn.	8.5	9	8.5	10
Bristol, Tenn.	9.75	10.25	8.5	12
Little Rock, Ark.	6.75	8.5	8	10

*Louisiana kerosine prices are ex 1c state tax.

Discounts:

Esso Gasoline—To individed dealers, 0.5c off dealer t.w.

Humble Oil & Refining Co.

Humble Motor Fuel (Regular Grade)
Thriftane (*Third Grade*)

	Humble *Tank Wagon	Re-tail	Thriftane *Tank Wagon	Re-tail	Gasoline Taxes
Dallas, Tex.	†6	9	5	8	5.5
Ft. Worth, Tex.	6	10	5	8	5.5
Houston, Tex.	7	11	5	8	5.5
San Antonio, Tex.	7	11	5	8	5.5

	Kerosine *Tank Wagon	Retail
Dallas, Tex.	6	10
Ft. Worth, Tex.	7	11
Houston, Tex.	8	11
San Antonio, Tex.	7	11

74 Oct. Aviation Gasoline, Clear	Tank Car
FOB Baytown, Tex.	8.5

*To all classes of dealers & consumers.

†Less 1c discount to dealers only.

The Texas Co.

	Gasoline—Dealer T.W. Fire-Chief (*Regular*)	Indian (*3rd Grade*)	Gasoline Taxes
Dallas, Tex.	*6	5	5.5
Ft. Worth, Tex.	..	5	5.5
Wichita Falls, Tex.	7	5	5.5
Amarillo, Tex.	7	5	5.5
Tyler, Tex.	7	5	5.5
El Paso, Tex.	9	8	5.5
San Angelo, Tex.	7	5	5.5
Waco, Tex.	6.5	4.5	5.5
Austin, Tex.	7	5	5.5
Houston, Tex.	7	5	5.5
San Antonio, Tex.	7	5	5.5
Port Arthur, Tex.	7	5	5.5

*Less 1c temporary allowance to all dealers.

Continental Oil

	Conoco Bronz-z-z (*Regular*) †Tank Wagon	Demand (*3rd Grade*)	Gasoline Taxes	Kerosine T.W.
Denver, Col.	9	8	5.5	10.5
Grand Junction, Col.	11	10	5.5	12
Pueblo, Col.	10	8	5.5	9
Casper, Wyo.	11	10	5.5	11.5
Cheyenne, Wyo.	6.5	5.5	5.5	11
Billings, Mont.	10	9	6.5	12
Butte, Mont.	9	8	6.5	13
Great Falls, Mont.	9	8	6.5	12
Helena, Mont.	9	8	6.5	12.5
Salt Lake City, Utah	10.5	9.5	5.5	14
Boise, Ida.	12.1	11.1	6.5	16
Twin Falls, Ida.	13.1	12.1	6.5	16.5
Albuquerque, N. M.	9	8	*7	9.5
Roswell, N. M.	7	6	*7	8
Santa Fe, N. M.	9.5	8.5	*7.5	9.5
Ft. Smith, Ark.	8	5.75	*5.5	6.5
Little Rock, Ark.	8	5.5	8	8
Texarkana, Ark.	8	6	*5.5	6
Muskogee, Okla.	8	7	5.5	7
Oklahoma City, Okla.	6	5.5	5.5	6.5
Tulsa, Okla.	7	6	5.5	6

***Taxes:** In gasoline tax column are included these city taxes—Albuquerque, & Roswell, 0.5c; Santa Fe, 1c. Texas 4c state tax applies within city limits of Texarkana, Ark.; Okla. 4c state tax applies within city limits of Ft. Smith, Ark.

†To consumers and dealers, except at Cheyenne where consumer t.w. prices are 2.5c above dealer t.w. prices shown above, and Oklahoma City where consumer t.w. prices are 1c and 0.5c above Bronz-z-z and Demand dealer t.w. prices, respectively, shown above.

S. O. California

Standard Gasoline (*Regular Grade*)
Flight Gasoline (*Third Grade*)

	Standard Tank Truck	Standard Retail	Flight Tank Truck	Flight Retail	Gasoline Taxes
San Francisco, Cal.	12	13	10	11	4.5
Los Angeles, Cal.	11.5	12.5	9.5	10.5	4.5
Fresno, Cal.	13	14	11	12	4.5
Phoenix, Ariz.	14	15	11	12	6.5
Reno, Nev.	14	15	12	13	5.5
Portland, Ore.	12.5	13.5	10.5	11.5	6.5
Seattle, Wash.	12.5	13.5	10.5	11.5	6.5
Spokane, Wash.	14	15	12	13	6.5
Tacoma, Wash.	12.5	13.5	10.5	11.5	6.5

	Stanavo Tank Truck	Aviation Gasoline Taxes	Kerosine Tank Truck
San Francisco, Cal.	15.5	4.5	11.5
Los Angeles, Cal.	15	4.5	10
Fresno, Cal.	16.5	4.5	12.5
Phoenix, Ariz.	17.5	6.5	*12.5
Reno, Nev.	17.5	5.5	13.5
Portland, Ore.	16	6.5	13.5
Seattle, Wash.	16	6.5	13.5
Spokane, Wash.	19	6.5	16.5
Tacoma, Wash.	16	6.5	13.5

*Taxes: Phoenix kerosine price is ex 5c state tax.

Discounts:

To Resale & Commercial Consumers—3c off posted tank truck tax included price on Standard & Stanavo Aviation, 2c off on Flight. Deliveries less than 40 gals. to commercial consumer trade, 1c a gal. above posted tank truck tax included price, except single deliveries to Marine trade only which are billed at posted tank truck tax included price less 3c for Standard & Stanavo Aviation, and less 2c for Flight.

Kerosine—Tank car and truck & trailer deliveries, 3c off posted tank truck price; plant stem deliveries to jobbers, 2.5c off posted tank truck price.

Canada

PRICES OF IMPERIAL OIL LTD.
Per Imperial Gallon, which is 1.2 U. S. Gallons
3-Star Imperial Gasoline (*Regular Grade*)

	Gasoline T.W.	Gasoline Taxes	Kerosine T.W.
Hamilton, Ont.	16.5	8	17
Toronto, Ont.	16.5	8	17
Brandon, Man.	21	7	23
Winnipeg, Man.	20.5	7	22.5
Regina, Sask.	18	7	20
Saskatoon, Sask.	21	7	23
Edmonton, Alta.	18.9	7	20.9
Calgary, Alta.	16	7	18
Vancouver, B. C.	16	7	23
Montreal, Que.	16	8	16.5
St. John, N. B.	14.50	10	18
Halifax, N. S.	14.50	10	18

Discounts: Gasoline—Maritime Provinces—undivided & divided dealers, t.w. price; British Columbia—undivided and divided dealers, 2c off t.w. price; balance of territory—undivided dealers, 1c off t.w. price, divided dealers, t.w. price.

Tank Wagon Price Changes

(These changes have been made in price tables)

Socony-Vacuum—Mobilgas:

Commercial t. c. up 0.3c at Binghamton, Buffalo, Jamestown, Rochester, & Syracuse Feb. 24.

Atlantic Refining—Kerosine:

Hagerstown t. w. cut 2.4c Feb. 18. Wilmington, N. C. t. w. cut 0.2c Feb. 22.

S. O. Kentucky—Crown Gasoline:

Jackson cut 0.5c Feb. 12 & 0.5c Feb. 15. Macon cut 0.5c Feb. 15.

S. O. Kentucky—Standard Gasoline:

Jackson cut 1c Feb. 12 & 1c Feb. 15. Macon cut 0.5c Feb. 15.

S. O. Louisiana—Kerosine:

Chattanooga cut 1c Feb. 21. Nashville cut 1c Feb. 11.

Humble Oil—Humble Motor Fuel:

Dallas dealers allowed 1c discount from posted t. w. beginning Feb. 24; Dallas s. s. cut 1c same date.

Continental Oil—Demand Gasoline:

Advance of 0.5c reported by Continental as of Feb. 10 at Little Rock (NPN of Feb. 19) was in error. Price was unchanged at 5.5c.

CRUDE OIL PRICES

Prices in $ per bbl. of 42 U. S. gals. at the well. A. P. I. gravity. Prices are effective as of 7 a. m. of dates as given

EASTERN & CENTRAL STATES FIELDS

PENNSYLVANIA GRADE

Posted by Jos. Seep Purch. Agency (Jan. 27, '41)

Bradford-Allegany $2.30
Southwest Penna. $1.95
Eureka (West Va.) $1.89
Corning, O. (Nov. 4, 1939) $1.12

Posted by Tide Water Assoc. Oil Co. (Jan. 27, '41)

Bradford-Allegany $2.30

Posted by The Pennzoil Co., (Jan. 27, '41)

National Transit $2.23*

Posted by Valvoline Pipe Lines (Jan. 27, 1941)

Bradford (Elk & McKean Counties, Pa.) $2.30
Warren, Forest, Venango, Clarion & Butler Counties, Pa. $2.23
Allegheny, Beaver, Washington & Greene Counties, Pa. $1.95
West Virginia $1.89
South Eastern Ohio $1.85

*Applies to Cochran, Franklin, Hamilton & Doolittle districts; prices in other lower districts range down to $2.18 per bbl. at well.

MICHIGAN

Posted by Pure Oil Co. (Jan. 2, '41)

Midland, Midland County $1.22
Sherman, Clare-Freeman $1.17

Posted by Simrall Corp. (Jan. 2, '41)

Greendale, Porter, Vernon, Crystal & Wise $1.22
Buckeye, Bentley, Edenville, Beaverton & sweet crude type of Monitor $1.20
Freeman, Redding & Lincoln $1.17
West Branch-Arenac $1.02
Hamilton-Grout $1.07

Posted by Sohio Corp. (Michigan Division)

Traverse Crude in Allegan, Kent & Ottawa Cos., Bloomingdale & Columbia Twps. in Van Buren Co. (Jan. 16, '41) $1.23
Trenton Crude in Monroe Co. (Jan. 16, '41) $1.17

Posted by Bay Pipe Line Corp. (Jan. 2, '41)

Saginaw & Wise $1.22 — Buckeye & Bentley $1.20
Clare $0.91 — Adams $1.05
Bay Distillate $1.48

ILLINOIS-INDIANA-KENTUCKY

Posted by Sohio Corp.

Illinois Basin, including Griffin pool (Aug. 21,'40) $1.15
Carmi, Storms, Ill. area (Feb. 1, '41) 1.10
Birk City, Ky. area (Jan. 1, '41) 1.10
Corydon, Ky. area, Henderson (Jan. 1, '41) 1.10

Posted by Ohio Oil Co.

Illinois Basin (Aug. 21, '40) $1.15
Illinois & Western Indiana (Aug. 23, '40) 1.00

Posted by Carter Oil Co. (Aug. 21, '40)

Louden, Fayette Co. Ill. $1.15

Posted by Mohawk Oil Lines, Inc. (Aug. 21, '40)

So. Illinois heavy $1.05 — Light $1.15

Posted by Ashland Oil & Transp. Co. Somerset oil in Ash. Lines, Ky.: (Aug. 21, '40)

Big Sandy River $1.12 — Kentucky River $1.20

Posted by Owensboro-Ashland Co.

Owensboro, Ky. area (Aug. 21, '40) $1.10

MID-CONTINENT

OKLAHOMA-KANSAS-NORTH TEXAS

(See below for companies posting and dates)

Gravity	Schedule No. 1	Schedule No. 2	Schedule No. 3	Schedule No. 4	Schedule No. 5
Below 21	$0.70	$0.60	....	....	$0.63
21-21.9	.72	.63	....	....	.65
22-22.9	.74	.66	....	....	.67
23-23.9	.76	.69	....	....	.69
24-24.9	.78	.72	....	....	.71
25-25.9	.80	.75	....	$0.58	.73
26-26.9	.82	.78	....	.63	.75
27-27.9	.84	.81	....	.68	.77
28-28.9	.86	.84	$0.86	.73	.79
29-29.9	.88	.87	.88	.78	.81
30-30.9	.90	.90	.90	.82	.83
31-31.9	.92	.92	.92	.86	.85
32-32.9	.94	.94	.94	.90	.87
33-33.9	.96	.96	.96	.96	.89
34-34.9	.98	.98	.98	.98	.91
35-35.9	1.00	1.00	1.00	1.00	.93
36-36.9	1.02	1.02	1.02	1.02	.95
37-37.9	1.04	1.04	1.04	1.04	.97
38-38.9	1.06	1.06	1.06	1.06	.99
39-39.9	1.08	1.08	1.08	1.08	1.01
40 & above	1.10	1.10	1.10	1.10	1.03

Above schedules posted by:

No. 1: S. O. Indiana Oct. 17, '38 in Okla. & Kans.

No. 2: Carter Oct. 13, '38 in Okla.; Magnolia Oct. 12, '38 in Okla.; Shell Oct. 22, '38 in Okla. & Kans.

No. 3: Continental Oct. 11, '38 in Okla. & Kans. with lowest grade Below 29; Texas Co. Oct. 12, '38 in Okla. & Kans.

No. 4: Sinclair-Prairie Aug. 31, '39 in Okla. & Kans.

No. 5: Stanolind Sept. 1, '40 in N. Texas; Continental Oct. 11, '38 in N. Texas; Texas Co. Oct. 12, '38 in N. & N. Central Texas; Magnolia Dec. 3, '38 in N. & N. Central Texas; Sinclair-Prairie July 16, '40 in Mexia & N. Central Texas. Texas Co.'s lowest grade is 28-28.9 at $0.79; Continental, Magnolia and Sinclair-Prairie postings begin with Below 29 at $0.79.

TEXAS & NEW MEXICO FIELDS

Posted by Humble Oil & Refining Co. (Oct. 2, '39)

Gravity	West Central Texas	East Central Texas	Gray County	Carson & Hutchinson Counties	Tomball, Etc.	West Texas & New Mexico	Texas Gulf Coast & Mirando	Anahuac-Dickinson	Refugio
Below 20	....	....	....	....	....	$0.53	$0.86	$0.81	$0.91
20-20.9	....	....	....	....	....	.55	.88	.83	.93
21-21.9	....	....	....	....	....	.57	.90	.85	.95
22-22.9	....	....	....	....	$0.95	.59	.92	.87	.97
23-23.9	....	$0.78	....	....	.97	.61	.94	.89	.99
24-24.9	$0.71	.80	....	....	.99	.63	.96	.91	1.01
25-25.9	.73	.82	....	....	1.01	.65	.98	.93	1.03
26-26.9	.75	.84	....	....	1.03	.67	1.00	.95	1.05
27-27.9	.77	.86	....	....	1.05	.69	1.02	.97	1.07
28-28.9	.79	.88	$0.72	$0.67	1.07	.71	1.04	.99	1.09
29-29.9	.81	.90	.74	.69	1.09	.73	1.06	1.01	1.11
30-30.9	.83	.92	.76	.71	1.11	.75	1.08	1.03	1.13
31-31.9	.85	.94	.78	.73	1.13	.77	1.10	1.05	1.15
32-32.9	.87	.96	.80	.75	1.15	.79	1.12	1.07	1.17
33-33.9	.89	.98	.82	.77	1.17	.81	1.14	1.09	1.19
34-34.9	.91	1.00	.84	.79	1.19	.83	1.16	1.11	1.21
35-35.9	.93	1.02	.86	.81	1.21	.85	1.18	1.13	1.23
36-36.9	.95	1.04	.88	.83	1.23	.87	1.20	1.15	1.25
37-37.9	.97	1.06	.90	.85	1.25	.89	1.22	1.17	1.27
38-38.9	.99	1.08	.92	.87	1.27	.91	1.24	1.19	1.29
39-39.9	1.01	1.10	.94	.89	1.29	.93	1.26	1.21	1.31
40 & above	1.03	1.12	.96	.91	1.31	.95	1.28	1.23	1.33

W. Central Tex. includes crudes purchased in Brown, Callahan, Coleman, Comanche, Eastland, Fisher, Haskell Jones, Shackelford, Stephens, Throckmorton & Young Cos., Tex.

E. Central Tex. includes crudes purchased in Anderson, Cherokee, Limestone & Navarro Cos., Tex.

W. Tex. & N. Mex. includes crudes purchased in Andrews, Crane, Crockett, Ector, Gaines, Glasscock, Howard, Reagan, Upton, Winkler & Yoakum Cos., Tex. & Lea Co., N. Mex.

Tex. Gulf Coast includes crudes purchased in Goose Creek, Sugarland, Thompsons, Mykawa, Amelia, Webster & Clear Lake fields.

Anahuac-Dickinson includes crudes purchased in Gillock, Cedar Point, Fairbanks, Turtle Bay, Hull, Pierce Junction & Raccoon Bend (Shallow Sand) fields.

Refugio includes crudes purchased in Saxet, East White Point, Greta, O'Connor-McFadden, Taft, Plymouth & Tom O'Connor fields.

Mirando includes crudes purchased in Duval, Jim Hogg, Webb & Zapata Cos., Tex. & in Heyser & Placedo fields.

Postings for Raccoon Bend (Deep Sand) & Satsuma crudes are same as for Tomball.

East Texas $1.10
Van ..... .93
Pecos ..... .78
Talco $0.65
Conroe 1.27
Hardin 1.10
Flour Bluff & Jim Wells Cos. $1.23
Salt Flat, Darst Creek, Hilbig, Carroll, Clark & Zoboroski ..... .96

MAGNOLIA PETROLEUM CO.

Gray, Carson & Hutchinson Cos., Tex.—Dec. 3, '38 - same as Humble.

Tomball, Tex.—Dec. 3, '38 - same as Humble.

West Texas—Oct. 12, '38, in Crane, Glasscock, Howard, Mitchell, Upton & Winkler Cos. and Dec. 6, '40 in Cochran, Hockley, Yoakum & Gaines Cos.—same as Humble except Magnolia begins with Below 25 at $0.63.

N. Mexico—Oct. 15, '39, in Lea Co.—same as Humble except Magnolia begins with Below 25 at $0.63 and ends with 36 & above at $0.87.

Mirando, Tex.—Oct. 2, '39—same as Humble.

Beaumont, Tex.—Oct. 2, '39—same as Humble Texas Gulf Coast.

Cass & Panola Cos., Tex.—Oct. 12, '38—Below 25 grav. oil at $0.73, plus 2c per degree of gravity to top of 40 & above at $1.05.

Following Tex. postings Oct. 12, '38, except Talco Feb. 28, '41:

East Texas $1.10
Darst Creek ..... .96
Luling ..... .87
Lytton Springs ..... .99
Cleveland (Liberty Co.) $1.14
Hardin (Liberty Co.) 1.02
Talco 0.65

SINCLAIR-PRAIRIE OIL MARKETING CO.

Gray, Carson & Hutchinson Cos., Tex.—Aug. 31, '39—same as Humble.

West Texas & Lea Co., N. Mex.—Aug. 31, '39—same as Humble, except Sinclair begins with Below 25 at $0.63 and ends with 36 & above at $0.87.

Texas Gulf Coast—Oct. 3, '39—same as Humble.

East Texas (Oct. 2, '39) $1.10
Eddy Co., N. Mex. (Aug. 31, '39) ..... .77
Long Lake, in Anderson, Leon & Freestone Cos., Tex. (Jan. 20, '40) $1.08

STANOLIND OIL PURCHASING CO.

Tomball & Satsuma, Tex.—March 1, '41—same as Humble except Stanolind begins with Below 23 at $0.95.

Clinton, Tex.—Oct. 3, '39—same as Humble Texas Gulf Coast except Stanolind begins with Below 21 at $0.88.

Fairbanks, N. Houston & Rosslyn, Tex.—March 1, '41—same as Humble Anahuac-Dickinson schedule.

STANOLIND OIL & GAS CO.

West Beaumont, Jefferson Co., Tex.—Oct. 2, '39—same as Humble Texas Gulf Coast.

THE TEXAS CO.

(Effective Oct. 2, '39)

Panhandle, Tex.—Sweet crude same as Humble's Gray Co. except Texaco begins with 34-34.9 at $0.84. Sour crude same as Humble's Carson & Hutchinson Cos. except Texaco begins with 34-34.9 at $0.79.

West Texas & Lea Co., N. Mex.—Same as Humble except Texaco begins with Below 26 at $0.65 and ends with 36 & above at $0.87.

Texas Gulf Coast—Same as Humble except Texaco ends with 34 & above at $1.16.

Mirando-Duval, Tex.—Same as Humble except Texaco ends with 28 & above at $1.04.

Refugio, Tex.—Same as Humble except Texaco ends with 28 & above at $1.09.

Following Tex. postings Oct. 2, '39:

East Texas $1.10
Darst Creek ..... .96
Cass Co. $1.05
Conroe 1.27

SHELL OIL CO., INC.

West Texas & Lea Co., N. Mex.—Aug. 29, '39, & Yoakum Co., Tex. Sept. 1, '39—same as Humble except Shell ends with 36 & above at $0.87.

Fisher Co., Tex.—Aug. 29, '39—Below 25 grav. at $0.68, plus 2c per degree of gravity up to 40 & above at $1.00.

Following Tex. postings Oct. 5, '39:
East Texas $1.10
Livingston area, Polk Co. 1.10

Following Tex. postings Aug. 29, '39:
Pecos Co., except Yates Shallow pool $0.78
Pecos Co., Yates Shallow pool ..... .65

CONTINENTAL OIL CO.

Eddy Co., N. Mex.—Apr. 22, '40—Begins with Below 29 at $0.61, plus 2c per degree gravity up to 40 & above at $0.85.

Mirando, Tex.—Feb. 1, '41—same as Humble, except Continental begins with Below 21 at $0.88.

Alfred & Magnolia City, Tex. (Jim Wells Co.)—Jan 1, '41—$1.08.

PAN AMERICAN PIPE LINE CO.

Hastings & So. Houston, Tex. crudes—Oct. 1, '40—same as Humble Texas Gulf Coast except Pan Am. begins with Below 21 at $0.88.

Cayuga, Anderson Co., Tex.—Oct. 2, '39—$0.78.

East Texas—Jan. 1, '41—$1.10.

CRUDE OIL PRICES *(Continued from preceding page)*

CALIFORNIA *Posted by Standard Oil of California*

All gravities above those quoted take highest price offered in the field. Prices effective Feb. 1, 1940

FOB Standard Pipeline

Gravity	Signal Hill (Long Beach) and others*	Seal Beach	Huntington Beach	Inglewood	Playa Del Rey	Olinda Brea Canon	Athens-Rosecrans	Torrance	Richfield	Whittier East Coyote (La Habra)	Montebello	West Coyote Hills	Santa Fe Springs	Greeley Canal	Colen Levee Richfield Western	Mountain View and others**	Elk Hills, Buena Vista Hills, Midway-Sunset, Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Santa Maria Val. (Union Oil, Sept. 1 '39)
14-14.9	$0.65	$0.64	$0.63	$0.64	$0.65	$0.61	....	$0.65	$0.61	$0.61	$0.62	$0.63	....	....	....	$0.60	$0.60	$0.60	$0.60	....	$0.42
15-15.9	.65	.64	.63	.64	.65	.61	....	.65	.61	.61	.62	.63	....	....	....	.60	.60	.60	.60	....	.44
16-16.9	.65	.64	.63	.64	.65	.61	....	.65	.61	.61	.62	.63	....	....	....	.60	.60	.60	.60	....	.45
17-17.9	.65	.64	.63	.68	.65	.61	....	.65	.61	.61	.62	.63	....	....	....	.60	.60	.60	.60	....	.46
18-18.9	.65	.64	.63	.71	.65	.65	....	.68	.61	.61	.62	.63	....	....	....	.60	.60	.60	.60	....	
19-19.9	.69	.64	.67	.75	.70	.69	....	.72	.61	.65	.62	.63	....	....	....	.60	.64	.64	.61	$0.60	....
20-20.9	.73	.64	.72	.79	.76	.74	....	.75	.65	.69	.62	.67	....	....	....	.60	.69	.69	.62	.60	....
21-21.9	.78	.64	.76	.82	.81	.78	....	.79	.69	.73	.62	.72	$0.63	....	....	.64	.74	.74	.66	.60	....
22-22.9	.82	.69	.81	.86	.86	.82	....	.82	.73	.77	.66	.76	.63	....	....	.68	.79	.78	.70	.63	....
23-23.9	.86	.75	.85	.89	.92	.86	$0.71	.86	.78	.82	.71	.81	.67	....	....	.71	.84	.82	.74	.67	....
24-24.9	.90	.80	.90	.93	.97	.90	.77	.89	.82	.86	.75	.85	.72	....	....	.75	.89	.86	.78	.71	....
25-25.9	.95	.86	.94	.96	1.02	.95	.82	.93	.86	.90	.80	.89	.77	....	....	.79	.94	.90	.82	.75	....
26-26.9	.99	.91	.99	1.00	1.08	.99	.88	.96	.90	.94	.84	.94	.82	....	....	.83	.99	.95	....	....	....
27-27.9	1.03	.97	1.03	1.04	....	1.03	.94	1.00	.94	.98	.89	.98	.87	$0.83	$0.92	.87	1.04	.99	....	....	....
28-28.9	1.07	1.02	1.07	1.07	....	1.07	.99	1.03	.98	....	.93	1.02	.91	.86	.96	.91	1.09	1.03	....	....	....
29-29.9	1.10	1.07	1.11	1.10	....	1.10	1.04	1.06	1.02	....	.98	1.06	.96	.90	.99	.95	1.14	1.07	....	....	....
30-30.9	1.14	1.12	1.15	1.14	....	1.14	1.09	1.09	Elwood Terrace		1.02	1.10	1.01	.94	1.02	.99	1.19	1.11	....	....	....
31-31.9	....	....	....	1.17	....	1.17	1.14	Elwood Terrace			1.07	1.14	1.05	.98	1.06	1.02	1.24	Kettleman Hills			....
32-32.9	....	....	....	1.20	....	1.20	1.19	F. O. B. ship.			1.11	1.18	1.09	1.02	1.09	1.06	1.29				....
33-33.9	....	....	....	....	....	....	1.24	....	$1.21	....	1.15	1.22	1.14	1.06	1.13	1.10	1.34	....	$1.12	....	....
34-34.9	....	....	....	....	....	....	1.29	....	1.25	....	1.20	1.26	1.19	1.10	1.16	1.14	....	....	1.17	....	....
35-35.9	....	....	....	....	....	....	1.34	....	1.29	....	1.24	....	1.23	1.14	1.20	....	....	....	1.21	....	....
36-36.9	....	....	....	....	....	....	1.39	....	1.33	....	1.28	....	1.27	1.18	1.23	....	....	....	1.25	....	....
37-37.9	....	....	....	....	....	....	1.44	....	1.37	....	1.33	....	1.31	1.22	1.26	....	....	....	1.29	....	....
38-38.9	....	....	....	....	....	....	1.49	....	....	....	1.37	....	1.36	1.25	1.30	....	....	....	1.33	....	....
39-39.9	....	....	....	....	....	....	1.54	....	....	....	1.42	....	....	1.29	1.34	....	....	....	1.38	....	....
40-40.9	....	....	....	....	....	....	1.59	....	....	....	1.46	....	....	1.33	1.37	....	....	....	....	....	....
41-41.9	....	....	....	....	....	....	....	....	....	....	1.50	....	....	1.37	1.40	....	....	....	....	....	....
42-42.9	....	....	....	....	....	....	....	....	....	....	1.54	....	....	1.41	1.44	....	....	....	....	....	....
43-43.9	....	....	....	....	....	....	....	....	....	....	1.59	....	....	1.45	1.47	....	....	....	....	....	....
44-44.9	....	....	....	....	....	....	....	....	....	....	1.63	....	....	1.49	1.51	....	....	....	....	....	....
45-45.9	....	....	....	....	....	....	....	....	....	....	1.67	....	....	1.53	1.54	....	....	....	....	....	....
46-46.9	....	....	....	....	....	....	....	....	....	....	1.71	....	....	1.57	1.57	....	....	....	....	....	....
47-47.9	....	....	....	....	....	....	....	....	....	....	....	....	....	1.61	....	....	....	....	....	....	....
48-48.9	....	....	....	....	....	....	....	....	....	....	....	....	....	1.64	....	....	....	....	....	....	....

*El Segundo prices same as Signal Hill. Wilmington prices same as Signal Hill, except below 19 gravity prices are: 14-16.9, $0.60; 17-17.9, $0.62; 18-18.9, $0.64.
**Includes Newhall, McKittrick, Kern River, Round Mountain and Kern Front, schedule for which ends with 19-19.9. Mountain View schedule begins with 19-19.9.

LOUISIANA-ARKANSAS

Posted by S. O. Louisiana, Oct. 17, '40

Gravity	Bunkie, La. etc.	Caddo, La. etc.	Darrow, La. etc.	University, La. (Baton Rouge)	Atlanta, Ark. etc.
Below 21	....	....	$0.75	$0.91	$0.55
21-21.9	....	....	.77	.93	.57
22-22.9	....	....	.79	.95	.59
23-23.9	....	....	.81	.97	.61
24-24.9	....	....	.83	.99	.63
Below 25	$0.83	$0.73	....	....	....
25-25.9	.85	.75	.85	1.01	.65
26-26.9	.87	.77	.87	1.03	.67
27-27.9	.89	.79	.89	1.05	.69
28-28.9	.91	.81	.91	1.07	.71
29-29.9	.93	.83	.93	1.09	.73
30-30.9	.95	.85	.95	1.11	.75
31-31.9	.97	.87	.97	1.13	.77
32-32.9	.99	.89	.99	1.15	.79
33-33.9	1.01	.91	1.01	1.17	.81
34-34.9	1.03	.93	1.03	1.19	.83
35-35.9	1.04	.94	1.04	1.20	.84
36-36.9	1.05	.95	1.05	1.21	.85
37-37.9	1.06	.96	1.06	1.22	.86
38-38.9	1.07	.97	1.07	1.23	.87
39-39.9	1.08	.98	1.08	1.24	.88
40 & above	1.09	.99	1.09	1.25	.89

Bunkie, La. schedule includes Eola and Olla, La.

Caddo, La. schedule includes De Soto, Homer, Sabine & Sugar Creek, La., Fouke & Miller County, Ark.

Darrow, La. schedule includes, Bayou des Glaise, Bayou, Mallet, Choctaw, Jeanerette, Lirette, No. Crowley, Port Barre, Potash, Roanoke & St. Martinville, La.

Atlanta, Ark. schedule includes Buckner, Magnolia, Village & Schuler (Jones Sand Oil), Ark.

Cotton Valley:
Crude.....$1.05
Distillate.....1.10
Holloway Sand
Crude.....1.10
Rodessa.....$1.05
Shreveport (Cross Lake).....1.05
Smackover (Heavy) .73
Dorcheat, Big Creek, & McKamie (Sour Distillates).....95

(Continued in next column)

LOUISIANA-ARKANSAS (Cont'd)

Posted by Shell Oil Co., Inc. (Aug. 29, '39)
Iowa District, La.

Below 18	$0.75	23-23.9	$0.89	29-29.9	$1.04
18-18.9	.77	24-24.9	.92	30-30.9	1.06
19-19.9	.79	25-25.9	.95	31-31.9	1.08
20-20.9	.81	26-26.9	.98	32-32.9	1.10
21-21.9	.83	27-27.9	1.00	33-33.9	1.12
22-22.9	.86	28-28.9	1.02	34 & above	1.14

Black Bayou & White Castle Districts, La.—same as Iowa District, except Black Bayou, etc. begins with Below 20 at $0.79.

Gibson Field, Terrebonne Parish, La.....$1.04
Happytown Field, St. Martin, Parish, La.
(Jan. 12, '40).....1.00

Posted by Arkansas Fuel Oil Corp.

Urania, La. (Jan. 3, '41).....$0.95

Posted by Continental Oil Co.

Tepetate & Ville Platte, La. (Oct. 11, '38)....$1.03

Abbeville, La. (Jan. 1, '39)

Below 36	$0.92	37-37.9	$0.96	39-39.9	$1.00
36-36.9	.94	38-38.9	.98	40 & above	1.02

CANADIAN FIELDS

Posted by Imperial Oil Limited
Western Ontario (Nov. 6, 1939)

Petrolia.....$2.10 Oil Springs.....$2.17

Turner Valley Crude Oil (Sept. 12, '40)
(Prices FOB producer's tankage)

33-33.9	$1.08	44-44.9	$1.30	55-55.9	$1.52
34-34.9	1.10	45-45.9	1.32	56-56.9	1.54
35-35.9	1.12	46-46.9	1.34	57-57.9	1.56
36-36.9	1.14	47-47.9	1.36	58-58.9	1.58
37-37.9	1.16	48-48.9	1.38	59-59.9	1.60
38-38.9	1.18	49-49.9	1.40	60-60.9	1.62
39-39.9	1.20	50-50.9	1.42	61-61.9	1.64
40-40.9	1.22	51-51.9	1.44	62-62.9	1.66
41-41.9	1.24	52-52.9	1.46	63-63.9	1.68
42-42.9	1.26	53-53.9	1.48	64 & over	1.70
43-43.9	1.28	54-54.9	1.50		

Absorption Gasoline (Jan. 5, 1938)

90% Rec., 20 lb. Reid v.p.....$1.94
90% Rec. 17 lb. Reid v.p.....$2.08

ROCKY MOUNTAIN FIELDS

Posted by Stanolind Oil & Gas Co. (Oct. 11, '38, except Tensleep crude Feb. 1, '41)

Salt Creek (except Tensleep crude), Midway & Dutton Creek, Wyo.

Below 29	$0.86	32-32.9	$0.94	36-36.9	$1.02
29-29.9	.88	33-33.9	.96	37-37.9	1.04
30-30.9	.90	34-34.9	.98	38-38.9	1.06
31-31.9	.92	35-35.9	1.00	39-39.9	1.08
				40 & above	1.10

Wyoming:
Tensleep Crude....$0.6515
Frannie Light.....55
Frannie Heavy.....42
Hamilton Dome.....35

Wyoming:
Grass Creek Light $0.90
Grass Creek Heavy .40
Elk Basin.....90
Iles, Colo.....92

Posted by S. O. Indiana (June 5, '39)

Lance Creek, Wyo.....$0.77

Posted by Ohio Oil Co. (Oct. 11, '38)

Elk Basin, Wyo.....$0.90
Grass Creek, Wyo. Light.....90
Rock Creek, Wyo.....1.00
Lance Creek, Wyo.....77
Dry Creek, Mont.....92
Sunburst, Mont. (Nov. 16, '37).....90

Posted by Continental Oil Co. (Oct. 11, '38)
Ft. Collins & Wellington, Col.

Below 29	$0.81	32-32.9	$0.89	36-36.9	$0.97
29-29.9	.83	33-33.9	.91	37-37.9	.99
30-30.9	.85	34-34.9	.93	38-38.9	1.01
31-31.9	.87	35-35.9	.95	39-39.9	1.03
				40 & above	1.05

Canon City & Florence, Col.....$0.90
Cat Creek, Mont.. 1.10
Big Muddy, Wyo..$0.98
Lance Creek, Wyo. 0.77

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Address all Blind Box Number ads to National Petroleum News, 530 Penton Building, Cleveland, Ohio, unless otherwise specified.

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Must sell 1000 gallon oil truck. 1939 model equipped with auto stop printer and the best hose, pump, valves, power take off money could buy.
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· PERSONALS ·

Two new names may now be added to the already voluminous roster of Texas oilmen. **Freeman F. Gosden** and **Charles J. Correll** of New York City are the newest registrants, having purchased royalty in the Hawkins areas of East Texas, it is said. To other oilmen the two are more familiar in their roles as **Amos 'n Andy** of radio fame. Just what part the "Kingfish" played in the Hawkins deal was not reported.

* * *

Inducted into the Army last month under the Selective Service Act, **Winthrop Rockefeller,** junior executive in the Foreign Trade Department of Socony-Vacuum Oil Co., Inc., and grandson of John D. Rockefeller, said he was "awfully fond of the oil business" when a reporter asked if he planned to make a career of the Army. Private Rockefeller, Serial No. 32,002,756, also said he expected to be known as "Hey, you" until his service with the Army is completed.

* * *

When phoned by NPN's representative, **J. W. Carnes,** New York, vice-president in charge of marketing, Sinclair Refining Co. spoke cheerily: "My arm is still in a sling, will be for some time to come, but boy! it's great to be back at the desk again." Jack got tangled with a Grand Central station fruit skin hastening for his train and landed in the Mount Vernon Hospital with a broken right arm. "That hospital wasn't so bad though," reflected the convalescent, his mind probably turning back to those countless letters that had Sinclair aiding the unemployment situation in handling the extra correspondence. Jack was most appreciative of these notes of his well-wishers and is seeing to it that each and every note is answered. With the right arm still mending (and unless Jack is a southpaw), he may have quite a job scratching his scrawl to these letters.

* * *

"The Dark Tower", staged in Tulsa by the Stage Mart, features **Joe Lowe** of Shell Oil Co.'s accounting department in the leading role. Another Shell accountant, **Doug Gibson,** is in the cast of the mystery melodrama.

* * *

Honoring him for his active support in Oklahoma's fight against tuberculosis, the Tulsa Public Health Assn. has named **Charles W. Grimes,** Tulsa, independent oil producer, as T.P.H.A. president. Mr. Grimes has held the position of president of the Oklahoma Public Health Assn. in past years and is state president of the Sons of the American Revolution.

* * *

The Osage Oil & Gas Lessees Assn. has passed a resolution commending **William Ash Waid** for his 25 years of service to the industry as oil and gas inspector of the Osage Indian Nation. Mr. Waid is now retired and lives at Pawhuska, Okla., in the heart of the Indian country.

* * *

Before boarding the tugboat "Gladys Simpson" (see photo at left), three oil men stopped to talk over some business, or perhaps pose for this photograph. At any rate, they are, left to right: **A. F. Reed,** El Dorado, Ark., vice-president in charge of sales, Lion Oil Refining Co.; **H. G. Simpson,** Charleston, Mo., president of Simpson Oil Co. and **W. D. Cyphers,** El Dorado, Ark., manager of lubricating oil sales, Lion Oil Refining Co. The tugboat, named for Mr. Simpson's wife, was anchored at Lion's river terminal at Champagnolle Landing, 16 miles northwest of El Dorado on the Ouachita river.

Oyster Stew a la Daum. You won't find that on the menu anywhere, but **Chef Arnold Daum,** secretary of the Motor Fuel Committee of the American Petroleum Institute admits that he purloined its secret from a New York hotel. He has sent us the recipe, and our regret is that there are too few oyster months left with the necessary "R" in them.

* * *

"I needed a job and the company needed an office boy." These are the words of **George E. Kennedy** on announcing his recent retirement from Standard Oil Co. of California, with which he has been connected for 41 years. Rising through many positions, most of them in the sales end of the business, Mr. Kennedy became a director in 1931 and in 1934 was elected a director of Standard Stations, Inc., becoming executive vice-president of Standard Stations in 1938. In addition, Mr. Kennedy was executive vice-president of the Standard Oil Co. of British Columbia and vice-president of Standard Oil Co. of Texas.

* * *

Southwestern area Young Mens Christian Ass'n. in annual meeting at Dallas recently elected **A. V. Bourque,** Tulsa, president of A. V. Bourque, Inc., new president of the regional group.

A. V.'s interest in "Y" work dates back to the days when he was Y.M.C.A. physical director in Texas. In addition to his new position, Mr. Bourque is board member and chairman of the recreational committee of the Oil Capital Y. M. C. A.

* * *

"Sunny Florida, We are Here." **Marcus G. McGrath,** Chicago, president of Transamerican Petroleum Co., his wife, and daughter, Mary Jo, are now down at Fort Lauderdale, in the land of palms, race tracks, sunburns, and high prices. Also, winter vacationing down Florida way is **Edward Lockwood,** Racine, Wis., Lockwood Refiners Corp., president, who is watching the world go by on his cabin cruiser in Miami bay.

"Bill" Hern, South Bend, Ind., Refiners Oil Distributing Co. is also reported soaking up some of the sunshine down there.

Just returned from Florida-land is **Brown L. Meece,** Chicago, Globe Oil and Refining Co., assistant sales manager.

Refining Technology

INCLUDING INTERNATIONAL PETROLEUM TECHNOLOGY

ALKYLATION UNITS SPREAD Expansion of aviation activities in Ohio is bringing to Toledo the first alkylation plant between the eastern seaboard and the Chicago area. Standard Oil Co. of Ohio expects construction of its unit to begin in June and to be completed by Nov. 1. The sulfuric acid alkylation process to be employed will be one of the smallest if not the smallest so far built, according to reports, but will still produce several million gallons of alkylate in a year.

All feed stock required by the unit will be supplied from the normal cracking plant gases produced by the Toledo plant without resorting to isomerization. At the same time this refinery will continue to supply its year-old catalytic polymerization unit with charging stock.

Various exaggerated accounts have been published concerning this new plant, the tallest story, which was given wide circulation, being that it would utilize the new "Fluid Catalyst" process, announced at about the same time by Standard of New Jersey. This has been denied by company officials and authoritative information released.

Four Ohio developments in particular have been taken into account in planning for the production of alkylate. These are the expansion of Wright Field at Dayton, completion of two aviation engine plants, and construction of the government's aviation engine laboratory, with which the company will co-operate, at the Cleveland airport. The laboratory is now under construction and will be completed during the year.

* * *

CIVILIAN AVIATION Civilian airplanes are not going to compete with military nor with transport aviation as consumers of aviation fuel for several years at least, it is believed. Nevertheless it is interesting to note that more civilian airplanes were built in 1940 than in 1932, 1933, 1934, and 1935 put together and nearly twice as many as in 1939. Civilian aviation, however, is far from being even as significant a consumer of petroleum products as the high-speed diesel is today, for example, and is probably about as important as motor cars were in 1901, judging by comparative production figures.

Civilian aviation, however, must not be overlooked in consideration of future fuel demand. Under the stimulus of the government sponsored Civilian Pilot Training program last year 25,000 young men and women learned to fly and 15,000 more were near the completion of training at the end of the year. The number of active pilots increased from 31,829 on January 1, 1940, to some 65,000 at the end of the year, it is reported. These figures are given the greatest significance in connection with civilian plane production last year.

The approximately 6670 civilian planes produced in 1940 is comparable to the estimated 7000 motor cars produced in 1901 and, like 1940 plane production, was not quite double the previous year's production. It is not beyond the realm of possibility that the next 40 years will dot the sky with airplanes as the past 40 years has filled the roads with motor cars, trucks, and buses. Only for the time being will the program of military airplane production overshadow all other airplane production.

In 1940 the first year that the Bureau of Mines has reported aviation fuel separate from motor fuel, domestic demand for aviation fuel was 225,000,000 gallons. This is over twice the consumption of 1938, as reported by the Bureau of Air Commerce, nearly three times 1936 consumption, and four times 1933 consumption. Exports were 180,000,000 gallons, and production was 523,000,000 gallons.

* * *

SYNTHETIC CHEMICALS No synthetic chemical producible from petroleum, with the possible exception of ethyl alcohol, has been examined more carefully for its commercial possibilities than synthetic glycerine, it is apparent from a recent discussion of the economics of the market by E. C. Williams, Shell Development Co., before the American Institute of Chemical Engineers. In the past there have been a few instances of major oil companies jumping into the production of certain chemicals with disastrous results because the new large-scale production broke the market and tumbled prices below levels at which a profit could be made, according to a recent statement of the chief chemist of another large oil company.

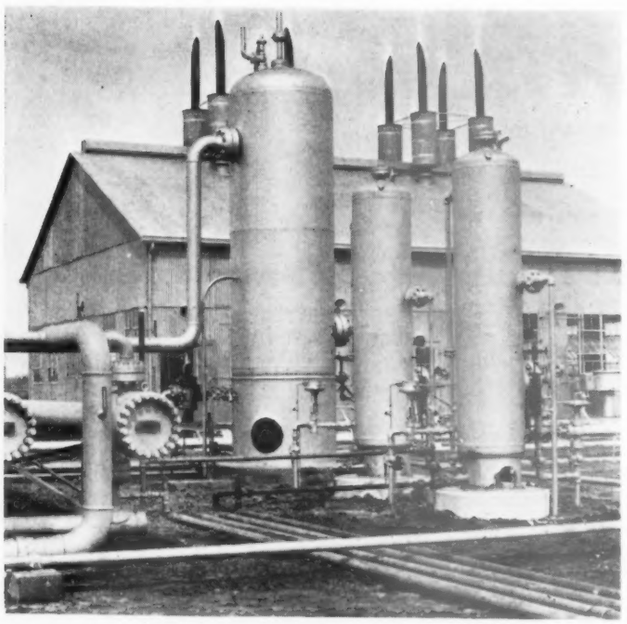
The practicability of commercial production of synthetic glycerine from petroleum depends on an industry's ability to guarantee a virtually inexhaustible potential supply of high grade glycerine at a reasonable price, Dr. Williams said. "The realization of this fact will in our opinion tend to act as a stimulus to industrial developments leading to new uses of glycerine—developments which might never be embarked upon in the absence of such guarantees," he concluded.

Whether the time is opportune now is a question which may be debated from many points of view, it was brought out. Among the facts disclosed by Dr. Williams were figures showing that glycerine consumption in the U. S. has multiplied by 3 in the past 20 years but that the soap industry, which is said to be the predominant producer of glycerine, expects no long term increase in soap production during the next several years.

It may be difficult to hold production rates at present levels in view of the increasing production of synthetic detergents and of municipal water softening plants with its resultant decrease in soap requirements, it is believed.

The most promising products in which glycerine is now used are alkyd resins, coating materials such as cellophane and parchment, tobacco, and explosives. About half of present domestic consumption is used in these commodities. The first two products are relatively new but have grown quite rapidly. So far the demand for glycerine for explosives apparently has not overtaxed production capacity by older methods nor boosted the price above a level near the low of the past 20 years.

Refiners Indifferent to Recycle-Condensate



Recycling plant separators at the Stratton, Texas, plant of Corpus Christi Corp. Pressure is reduced to 1200 p.s.i. in the largest (center) while those at the right are used to "weather" the condensate. Two heat exchangers at the left cool wet gas

ABSTRACT

Refiners of crude oil are not equipped to process present production of recycle distillate in Texas and Louisiana. Recycle plants, therefore, are installing distillation equipment and producing gasoline at lower cost than the refiner. Recycle plants are being built at $11 per gallon of daily condensate outfit. Condensate production in 1941 is expected to be 18,000,000 barrels, about 3% of Texas and Louisiana crude oil production.

Condensates are not particularly volatile nor high in antiknock and approximate the products of simple distillation of crude oil, through the lighter burning oils with 75% or more falling into the gasoline-naphtha range. Although they have high lead susceptibility, refiners usually prefer to reform a substantial part to raise the octane number.

REFINERS are not eagerly competing in the purchase of recycle condensate but rather are rejecting it generally, it was brought out by Emby Kaye, speaking before the American Institute of Mining and Metallurgical Engineers during its annual meeting in New York, Feb. 17-20. This is contrary to what would be expected from the dollar value of the component parts of the average condensate, balanced against the products manufactured from crude oil. Nor would they even if it were available at the price of 40° A. P. I. crude oil.

Reasons were said to vary with individual circumstances but were enumerated as follows: "(1) inadequacy of equipment for additional light end recovery; (2) insufficient reforming facilities; (3) addition of straight-run gasoline would enforce idleness upon cracking equipment; (4) lower-gravity crudes made possible an over-all higher motor fuel octane number; and (5) the need for burning oils that are present in larger quantities in crude oil."

Mr. Kaye briefly explained difference between the characteristics and value of condensate, natural gasoline, and refinery gasoline, using Table 1 to show the properties of 4 typical condensates. It was noted that only one field so far has produced condensate of type 3 which nearly approximates the more volatile grades of natural gasoline. Mr. Kaye said, "typical condensates are composed essentially of hydrocarbons boiling within the motor-fuel range with varying percentages of natural gasoline and kerosine distillate. Condensates 1, 2, and 4, as analyzed here, do not include the natural gasoline fractions, which would represent 10-20% of the total recoverable condensables in the gas. A composite condensate including the recovered natural gasoline would be composed of approximately 10% natural gasoline, 75% motor fuel or naphtha, and 15% kerosine distillate.

Table 1—Characteristics of Typical Condensates

	1	2	3	4
Gravity	64.1	55.2	83.0	61.7
Doctor	Negative	Negative	Negative	Negative
Color	Water White	22	30	20
Odor	Sweet	Sweet	Sweet	Sweet
Sulfur, per cent	0.01	0.00	0.00	0.01
Copper dish	Negative	Negative	Negative	Negative
	Degrees Fahrenheit			
1 boiling point	96	94	66	95
10 per cent	144	166	81	156
50 per cent	282	260	145	238
90 per cent	544	490	293	408
End point	606	568	385	498
Recovery, per cent	94	97	95	96.5
Residue, per cent	3	1.5	1	1.5
Loss, per cent	3	1.5	4.0	2.0

Condensate not "Natural"

"These data indicate that condensate is not a natural gasoline . . . Condensates . . . are neither particularly volatile nor high in antiknock. Motor fuels distilled from them to 400 end point show octane numbers from 50 to 64, the preponderance falling in the 50-60 range. Condensates more nearly approximate the products of simple distillation of crude oil, through the lighter burning oils, with 75% or more falling into the gasoline-naphtha boiling range. Any comparative evaluation of condensate with other products therefore should be with crude oil." This is shown in Table 2 using a crude oil of 40° A. P. I. gravity and assuming 74-octane gasoline is worth 4.5c a gallon.

"The high lead susceptibility of condensates permits the C. F. R. octane number to be increased with a minimum of tetraethyl lead," he said. "However, most refiners would prefer to reform a substantial part of this material to produce a finished fuel with a high octane rating by the research method that more nearly approximates performance of the road. The straight-run gasoline from condensate in column 2, Table 1, may be examined in column 2 of Table 3.

Table 3—Disposal of Products

	1 Condensate	2 Motor Fuel	3 Bottoms	4 Gas
Cut per cent	100	83.2	13.2	3.6
Gravity	55.2	57.1	37.2	....
Color	22	30	....	....
Doctor	Sweet	Sweet	....	....
Copper dish	Negative	Negative	....	....
Vapor pressure, lb.	10.1	4.9	....	....
Int. oct. CFG—M, c.c	....	57.5	....	....
Lead to 70 CRF-M, c.c	....	1.1	....	....
	Degrees Fahrenheit			
1 boiling point	94	124	440	
5 per cent	140	150	464	
20 per cent	166	190	480	
50 per cent	237	240	507	
90 per cent	400	352	590	
Maximum	400	....	....	
	568	402	652	
Recovery, per cent	97	98.0	98.0	
Loss, per cent	1.5	1.0	0.0	
Residue, per cent	1.5	1.0	2.0	

"If the motor-fuel value of the natural gasoline fraction in the condensate were used in comparing values instead of an assumed 2.5c per gallon, the gross difference in value between a barrel of crude and condensate would be 20.9c in favor of the condensate. This does not take into account the substantially higher processing costs involved in producing motor fuel from crude oil. Chemical costs for treating are eliminated, and corrosion, a considerable factor in the processing of most crude oils, can be ignored. The color-stable and low-sulfur condensate will do much to improve by dilution the poorer qualities of the refined fuels in these respects.

Install Distillation Equipment

"Selective buying by pipelines has caused condensate to be a drug on the market in several areas. It was not by deliberate choice, therefore, that the more recent plants have been designed to distill the condensate into its component parts. Other plants have added such facilities. Reasonably satisfactory fuels, including leaded grades, are produced entirely without reforming.

"Table 2 shows a substantially higher net back to the recycling plant making motor fuel than to the refiner operating on crude oil, even without taking into account the transportation cost the refiner must pay on crude oil. This comparative net back will prevail whether there is a profit or loss on the operation. The refiner of crude oil cannot produce gasoline at as low a price as can the operator of a recycling plant." The total cost of producing a gallon of condensate was given by Mr. Kaye as in the range from 2.46c a gal. for a plant of 25,000,000 cu. ft. per day capacity, to 2.01c a gal. for a plant of 60,000,000 cu. ft. daily capacity.

Table 2—Evaluation of Products*

End Products	Gallons	74 Octane (Less Lead Cost) Tetraethyl Lead, c.c.	Assumed Value	Realizable Value
Condensate				
10 per cent natural	4.2	...	0.025	$0.10500
10 per cent light gasoline	4.2	0.6	0.04344	0.18244
50 per cent cracked gasoline	21.0	0.6	0.04344	0.91284
15 per cent distillate	6.3	...	0.025	0.22050
13 per cent gas	5.46	...	0.015	0.08190
2 per cent loss	0.84	...	.....	.....
	100.00 per cent			$1.50
Crude oil				
20 per cent S.R. gasoline	8.4	2.3	0.03902	0.3277
10 per cent re-formed gasoline	4.2	0.6	0.04344	0.1824
30 per cent cracked gasoline	12.6	0.6+	0.043	0.5418
10 per cent distillate gasoline	4.2	...	0.035	0.1470
18 per cent fuel oil	7.56	...	0.015	0.1134
10 per cent gas	4.20	...	0.015	0.0630
2 per cent loss	0.84	...	.....	.....
	100.00 per cent			$1.375
Value of condensate products over products from barrels of crude				$0.125

*Front end volatility of motor fuel, column 2 deficient. Natural gasoline available will provide required volatility. Note, too, high lead susceptibility of motor fuel. Unstabilized condensate accounts for high loss shown in column

The efficiency of extraction of distillate was said to vary from 90% to over 99% of the pentanes and heavier and up to 80% of the butane regardless of pressure. However, if the pressure is reduced in the reservoir by withdrawal of gas, a part of the condensate will be liquefied and remain in the sand. This pressure drop can be calculated and the diminution in distillate content accurately determined. In one case a drop in pressure from 4900 to 3800 p. s. i. resulted in reducing distillate content of the gas from 18 to 9 bbl. per million cu. ft. A further drop in reservoir pressure to 2180 p. s. i. reduced the condensate content to 2.6 bbl. per million cu. ft. of gas.

Present recovery methods are highly efficient in extraction and are practiced without excessive gas loss or reservoir-pressure depletion except where the gas is exceedingly rich. Extraction pressure up to approximately 2000 p. s. i. has been observed and higher pressures are indicated. Three primary methods are used which were differentiated as follows: (1) mechanical refrigeration and retrograde process, (2) regenerative cooling and retrograde method, and (3) absorption processes operating at high pressures.

"In some plants combinations of these methods have been employed. Each method has its place or may be preferred by a particular designer for a specific situation. The character of the gas or the nature of the product desired, or both, may control the choice," according to Mr. Kaye.

Recycle Plant Cost

Consideration of many factors enter into the projecting of a recycle operation, Mr. Kaye said, and he discussed a number involved in the economics of plant size. Plants built to date have cost $8-13 per 1000 cu. ft. or per gallon of condensate. Under normal conditions, $11 per 1000 cu. ft. should, with wells of average size, cover the ordinary cost of an efficiently operable plant of 50,000,000 cu. ft. capacity, designed for a field having a reservoir pressure of 3000 p. s. i., he said. A plant should be projected to pay out the investment in 2½ to 3½ years and allow at least an additional 5 years of profitable operation, although exceptions to this were admitted.

The industry of recycling has now "caught up" with the big backlog of discovered fields and new projects will come along only with discoveries, Mr. Kaye said. Production of some 50,000 bbls. of condensate daily from some 30 plants is expected in the immediate future but oil production will presently begin to decline and new production is not likely to be maintained at anything like the pace of the immediate past. No gas-distillate field of any proportion has been discovered in the last year, it was brought out.

The daily production of condensate in 1941 will represent little more than 3% of the crude-oil production of Texas and Louisiana. This was 597,000,000 bbls. in 1940. Thus 3% would be about 18,000,000 bbls.

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REFINING TECHNOLOGY

March 5, 1941

Refiners are not eager for recycle distillate in spite of lower cost of gasoline produced from it by recycle plants. Condensates resemble products of simple distillation of crude oil and have high lead susceptibility but refiners generally prefer to reform much of it to raise octane number **R-66**

Yields of iso-octane between 31 and 37% were obtained by isomerization of octane in the presence of aluminum chloride in the laboratory. Best results were obtained by heating 1 to 2 hours at 120-140° F. using 10% of aluminum chloride **R-68**

Clear discussion of desulfurizing problems, leading up to development and use of solutizers to make caustic soda treatment more effective, gives more details of the process than presented heretofore and shows graphically the changes in lead susceptibility of straight run, cracked, reformed, and polymer gasolines, by H. N. La Croix **R-72**

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Obtain Up to 37% Iso-Octane In Catalytic Isomerization*

By A. P. Sivertsev†

ABSTRACT

Isomerization of normal octane in the laboratory in the presence of aluminum chloride, yields up to 31-37% of iso-octane, experiments show. Thermal isomerization yields were only 9.9% maximum. Decomposition of the normal octane with formation of hydrocarbons in the hexane boiling range also occurs and the amount of iso hydrocarbons in the products of decomposition and of polymerization were 38.5% when the catalyst was used, 44% without it. Best isomerization conditions were found to be 1 to 2 hours heating with 10% of anhydrous aluminum chloride at 120-140°F.

Normal heptane, isomerized in the presence of aluminum chloride, yielded 16% of iso compounds unevenly distributed among the fractions, the highest amount being in the heptane boiling range.

NORMAL aliphatic hydrocarbons are isomerized under the influence of heat and also when heated in the presence of catalysts or halogen salts of aluminum. This may be seen from the experiments by Friedmann[1], where a carefully fractionated n-octane acquires a wide boiling range after a prolonged exposure at 280° C. (536° F.)

The existence of an equilibrium between the normal and the iso-hydrocarbons of the aliphatic series was first pointed out by Montgomery, McAteer, and Franke[2], who found that independently of the type of hydrocarbon, heating with $AlBr_3$ always leads to a definite relationship of butane and iso-butane, i. e., 18% to 22% n-butane and 78% to 82% iso-butane.

At a still earlier date Askan[3], Nenitzescu and Cantuniari[4], and others observed isomerization of cyclohexane, which under the action of aluminum chloride was converted into methylcyclopentane. The reaction proceeded in the opposite direction when treating pure methylcyclopentane. Yur'ev and Pavlov[5] showed that the passage of normal octane over typical heated catalysts (Pt, Ni, Al_2O_3) results in a partial isomerization of normal octane.

Glasebrook, Phillips and Lovell[6] isomerized normal pentane, B. Moldavskii and S. Livshits[7], Friedel and Gorge[8], and also Nenitzescu and Dragan[9] investigated the isomerization of normal hexane. Experiments with normal heptane in this direction were carried out by the above Nenitzescu and then by A. Petrov, Meshcheryakov and Andreev[10], Calingaert and Flood[11], Calingaert and Beatty[12]. The isomerization of normal octane was investigated by B. Moldavskii, M. Kobyl'skii and S. Livshits[13], and Grignard and Stratford[14].

In this investigation experiments on the isomerization were carried out with synthetic normal heptane and normal octane. The synthetic heptane had the following properties:

Boiling point 97-99° C. (206-210° F.), d_4^{20} 0.6834, n_D^{20} 1.3862.

Normal heptane from *Pinus Jaffray* had the following constants:

Boiling point 98.4° C. (209.1° F.), d_4^{20} 0.6835, n_D^{20} 1.3835.

The synthetic octane had the following constants:

Boiling point 124-127° C. (255-261° F.), d_{20}^{20} 0.7020, n_D^{20} 1.3978.

The constants characteristic for normal octane according to literature data are:

Boiling point 125.59° C. (258.1° F.), d_4^{20} 0.7027, $n_D^{17.5}$ 1.3988.

Isomerization of Normal Octane

Normal octane was passed at various temperatures through a porcelain tube in an electrically heated tubular furnace. The condensate obtained in these experiments was treated with sulphuric acid (1.84), followed by washing with water, drying and distillation over sodium. It was then separated into two fractions, one boiling below 123° C. (253° F.) and the other boiling at 123-127° C. (253-261° F.). The amount of iso hydrocarbons was then determined in these fractions by the B. Moldavskii[15] method.

Experiment No. 2 was accompanied by the formation of 3.5 liters of gas which contained propylene, ethylene, hydrogen and methane hydrocarbons.

Experiment 3 yielded 10.27 liters of gas of approximately the same composition. Products obtained at 600° C. (1112° F.) were almost completely dissolved in strong sulphuric acid and the amount of iso hydrocarbons in them could not be determined. According to data in Table 1 it may be concluded that under the accepted conditions there is observed a slight isomerization which yields a maximum of 9.9% of iso hydrocarbons.

Action of Aluminum Chloride

In an attempt to find the best isomerization conditions, a series of experiments was made to determine the influence of various factors on the process of isomerization of normal octane. Thus it was found that at 20° C. (68° F.) and one hour 6% to 8% iso hydrocarbons are obtained in the presence of 5% to 50% $AlCl_3$. An increase of the temperature up to 50-60° C. (120-140° F.) sharply increases

* This is an abstract of a translation by A. A. Boehtlingk from the Journal General Chemistry, U. S. S. R. 10, 799-802 (1940). This translation is submitted by the Petroleum Division of the American Chemical Society. The society, however, assumes no responsibility for any of the statements made by the author.

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Table 1

No. of expt.	Gr. n-octane passed	Temp. of expt. °C.	Drop/sec. feeding veloc. of octane	Duration of expt. hrs. and min.	Total yield Grams	Total yield %	% iso compounds in separated fraction below 123°C.	% iso compounds in separated fraction at 123-127°C.
1	40	450	1/12	11	40	100	...	5.33
2	40	500	1/12	11	40	100	9.97	6.43
3	100	550	1/13	29h. 25m.	39	39	9.98	8.46
4	40	600	1/13	13h. 19m.	11	27.5	...	...

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Table 2

No. of frac.	Boiling pt. °C.	Yield Vol. %	Refractive Index: Obtained n 20/D	Refractive Index: According to literature data for		Specific Gravity: Obtained d 20/20	Specific Gravity: According to literature data for		Molecular Weight: Obtained	Molecular Weight: Must be for C_nH_{2n+2}		Iso compounds obtained: % (wt.) in frac.	Iso compounds obtained: in grams
1.....	30-40	1.5	1.3574	n-C_5H_{12} $n_D^{6.5}$	1.3649	0.6290	n-C_5H_{12} d^{15}	0.6337	74.0	C_5H_{12}	72	41.92	1.52
2.....	40-60	1.6	1.3663			0.6440			82.0			44.11	1.62
3.....	60-70	4.1	1.3741	n-C_6H_{14} n_D^{20}	1.3753	0.6602	n-C_6H_{14} d_4^{20}	0.6603	89.2	C_6H_{14}	86	41.60	4.53
4.....	70-90	3.2	1.3326			0.6767			100.5			40.36	3.28
5.....	90-100	1.2	1.3890	n-C_7H_{16} n_D^{20}	1.3877	0.6888	n-C_7H_{16} d_4^{20}	0.6836	106.5	C_7H_{16}	100.13	37.51	1.14
6.....	100-110	6.0	1.392			0.6943			110.0			37.38	5.78
7.....	110-123	23.8	1.3961			0.7012			116.6			31.30	19.53
8.....	123-127	45.4	1.3980	n-C_8H_{18} $n_D^{17.5}$	1.3988	0.7037	n-C_8H_{18} d_4^{20}	0.7027	119.0	C_8H_{18}	114	25.44	30.34
9.....	128-210	12.8	1.4111			0.7317			142.1			38.52	13.51

Total..... 84.25 = 31% on fraction b. at 30-210°C.

the yield of iso hydrocarbons to 26.4%. At 80° C. (176° F.) the yield of iso compounds is lower, while under the conditions of boiling octane with $AlCl_3$ the amount of iso hydrocarbons decreases to 15.75%. Ten per cent of $AlCl_3$ yields, at 50° C. (120° F.) for one hour, 27.83% of iso hydrocarbons. A 3-hour heating does not change the amount, while heating for 10 hours increases it to 30%. Thus, the best isomerization conditions were found to be 1-2 hours heating of the normal hydrocarbon with 10% of anhydrous aluminum chloride at a temperature of about 50-60° C. (120-140° F.). All the above experiments were carried out with a preliminary five-minute blowing of the reaction mixture with dry HCl.

A mixture of 400 grams of normal octane and 40 grams of anhydrous $AlCl_3$ were saturated with dry HCl for 5 minutes and then heated while being agitated for 6 hours at 50-55° C. (122-131° F.) After settling, 323 grams of the upper layer were separated. This was washed with water, dried and repeatedly fractionated over sodium. The results of the last distillation as well as the analyses of the separated fractions are summarized in Table 2.

These experiments show that along with the isomerization there occurs a decomposition of the normal octane with the formation of hydrocarbons in the hexane boiling range. Evidently, the rupture of the normal octane chain takes place initially between the second and the third carbon atoms. The resulting compounds contained more iso compounds than the original octane. Thus in the fractions boiling within the range of 80-90° C. (176-194° F.), 40-44% iso hydrocarbons were obtained, while in the products boiling within the temperature range of octane 30% of new iso compounds were produced. Polymerization products boiling above the original octane contained 38% of the iso hydrocarbons.

Isomerization of Normal Heptane

Normal heptane was similarly treated with $AlCl_3$ at 40° C. (104° F.) A mixture of 237 grams of normal heptane, 24 grams of $AlCl_3$, and dry HCl used for the saturation of the mixture for five minutes, were heated and agitated in a flask with a reflux condenser for 5 hours at 40° C. (104° F.). After cooling, the washed and dried upper layer weighed 204.5 grams (or 86.2%). The material was repeatedly fractionated over sodium. In Table 3 the yield of the fractions, the refractive index, the specific gravity, molecular weights and the iso hydrocarbon content are given.

Table 3 shows that under these conditions it is possible to obtain up to 16% of iso compounds which are unevenly distributed among the fractions. The equilibrium between the normal and the iso hydrocarbons in both cases shifts toward the iso hydrocarbons. In the case of plain cracking, compounds with a lower specific gravity are produced. In the case of condensation of the decomposition products, higher boiling derivatives are produced. However, the absolute amount of iso hydrocarbons is still highest in the heptane boiling range.

Conclusions

We have shown that the thermal isomerization of normal octane leads to a slight isomerization of it (up to 9.9%).

Normal octane can be isomerized up to 31-37% with $AlCl_3$ under the given conditions. The amount of iso hydrocarbons in the products of decomposition and of polymerization is somewhat higher (44% for the former and 38.5% for the latter).

The isomerization of normal heptane with aluminum chloride has also been effected.

We wish to express our appreciation to Professor A. F. Dobryanskii for his invaluable help and advice during this work.

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Table 3

No. of frac.	Boiling pt. °C.	Yield in % by wt.	Refractive Index: Obtained n 20/D	Refractive Index: According to literature data for		Specific Gravity: Obtained	Specific Gravity: According to literature data for		Molecular Weight: Obtained	Molecular Weight: Must be for C_nH_{2n+2}		Wt. % of iso cpd. on corr. fraction	Wt. % of iso cpd. on frac. b. at 19-182° C.
1	19-30	1.9	1.3553			d 15/15 0.6268			73.3			23.02	0.44
2	30-60	0.6	1.3672	n-C_5H_{12} $n_D^{6.5}$	1.3649	d 20/20 0.6391	n-C_5H_{12} d^{25}	0.6250	83.7	C_5H_{12}	72.11	29.99	0.18
3	60-80	3.1	1.3794	n-C_6H_{14} n_D^{20}	1.3753	d 20/20 0.6600	n-C_6H_{14} d_4^{20}	0.6603	91.6	C_6H_{14}	86.11	33.50	1.04
4	80-90	6.2	1.3811			d 20/20 0.6703			....			32.48	2.01
5	90-95	14.1	1.3855			d 20/20 0.6800			104			24.42	3.44
6	95-99	56.1	1.3878	n-C_7H_{16} $n_D^{17.6}$	1.3879	d 20/20 0.6834	n-C_7H_{16} d_4^{20}	0.6836	109	C_7H_{16}	100.13	13.50	7.57
7	99-182	4.2	1.3970			d 20/20 0.7036			118			35.93	1.51
											Total		16.19

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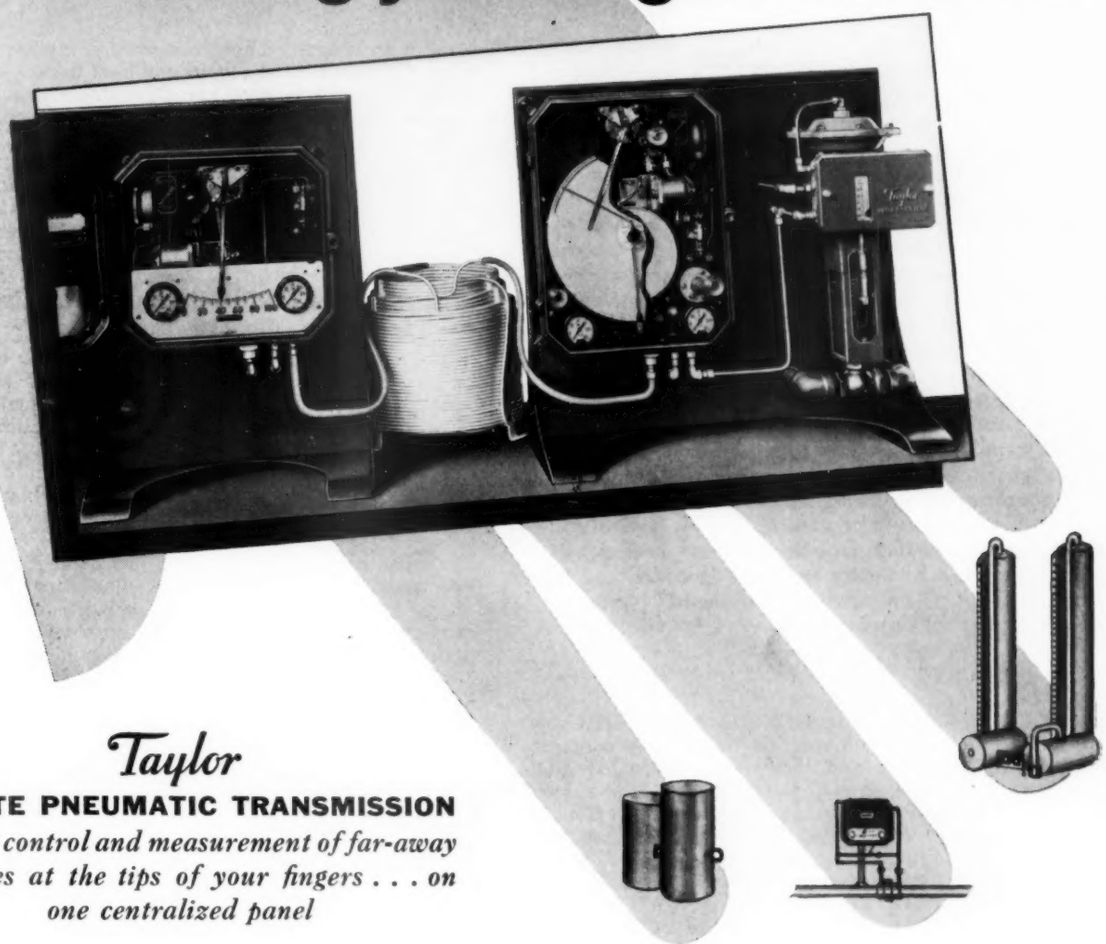

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Solutizers Improve Treating Of Four Types of Gasoline*

By H. N. La Croix†

ABSTRACT

The importance of developing maximum octane number in gasoline stocks has made it necessary to recognize the influence of sulfur compounds not removed by common treating processes on the effectiveness of tetraethyl lead in raising the octane number of gasoline, i.e., on lead susceptibility. The difficulty of extracting higher molecular weight mercaptans with caustic soda is their lesser solubility in water making up the caustic solution, plus the added effect of the caustic itself in "salting out" the mercaptans.

Most successful use of caustic soda solutions as extractants is dependent on addition of a substance which will increase solubility of mercaptans and overcome the "salting out" effect. "Solutizers" such as the potassium or sodium salt of iso-butyric acid have solved this problem and a process has been developed in which gasoline is contacted in countercurrent flow with "solutized" caustic through a bed of raschig rings.

ALL gasolines and gasoline blending stocks now used as motor fuels are evaluated and utilized by considering their octane numbers and their response to the addition of tetra-ethyl lead, commonly expressed as lead susceptibility. In turn, their octane numbers are dependent basically on their general chemical composition, and secondarily on their impurities.

This differentiation between general chemical composition and impurities is simply this: that what might be called "pure" gasoline would be a mixture of compounds containing combinations of only hydrogen and carbon, while "impurities" would be all other compounds. The majority of the impurities could be classed as compounds containing oxygen, sulfur, or nitrogen, with sulfur predominant. This paper relates to the sulfur impurities.

The most common types of sulfur impurities are hydrogen sulfide, mercaptans, sulfides and disulfides, thiophenols, thiophenes, and elemental sulfur. Of these, hydrogen sulfide and mercaptans are most frequently the objects of treatment because of their greater reactivity and more objectionable characteristics and odors in the finished product.

Because of its acidity and great reactivity hydrogen sulfide is easily removed by a number of methods. These may be by simple chemical washing; by distillation (stabilization); or extraction by the use of regenerative chemical agents, one of which is Shell's tri-potassium phosphate, which will remove hydrogen sulfide from both gases and liquids.

The less reactive sulfur impurities, such as sulfides and disulfides, thiophenes, and elemental sulfur are removed with great difficulty because of their relative inertness. They are removable by the use of sulfuric acid, special absorbents and catalytized agents. Since the majority of crude oils contain few of these and even when present, their presence does not cause any major corrosive action, they will not be discussed. It should be added in passing, however, that although they are not corrosive in the gasoline there is considerable argument about the corrosive action of their combustion products in the motor.

The remaining major class of sulfur impurities are the mercaptans. These compounds are very odiferous and obnoxious, particularly in confined areas. From the early use of gasoline and kerosine these impurities have required the attention of refiners and numerous processes were developed to act on them. In general, these processes, classed as "sweetening" processes, only related to the conversion of these malodorous active sulfur impurities to inert, low volatility disulfides. The best known of these processes are the doctor process, and variations of it, the hypochlorite process, and the copper chloride process.

Octane Number Control

As stated, the value of gasoline fuel stocks is based to a large extent on their octane number or on their lead susceptibility. Some hydrocarbons have octane numbers in excess of the requirements for the fuel in which they are blended while others have lower octane numbers. It is of utmost importance in the economic operation of a refinery to be able to develop the maximum octane number of any of these gasoline stocks when they are blended in a given motor fuel to produce a desired octane number.

The use of tetra ethyl lead (TEL.) makes it possible to raise the octane number of low octane gasoline to higher octane number. However, all gasolines do not show the same response to equal additions of lead, and this reaction to octane number improvement is known as "lead susceptibility." If a certain octane number gasoline shows a higher improvement in octane rating than another gasoline for a given tetra-ethyl lead addition, it is said to have a better lead susceptibility. Examples of this difference in lead susceptibility are shown in the following Table I, and are also shown plotted in Fig. 1. These differences in lead requirements represent concrete savings in refinery operations as may be seen from the evaluations shown in the right-hand margin of Fig. 1.

Variations in lead susceptibility such as the above can

*Presented before the American Society of Mechanical Engineers, Metropolitan Section, Petroleum Division, under the title "Improving Lead Susceptibility of Gasoline by Refining with the Shell Solutizer Process."

†Foster Wheeler Corp.

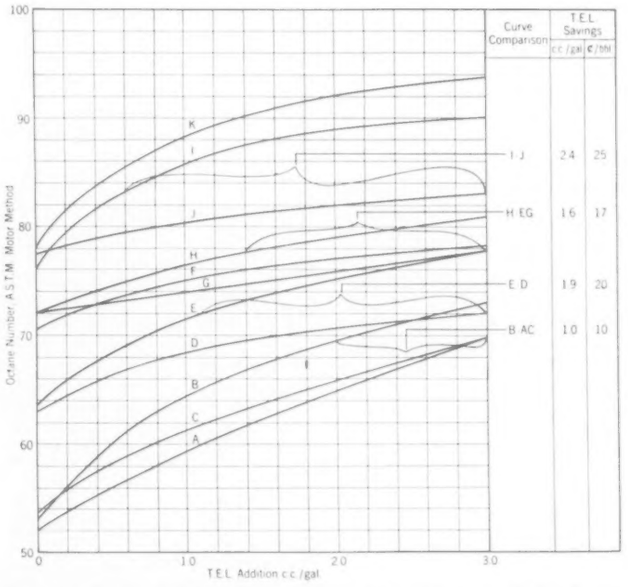

Fig. 1. Typical differences in octane numbers and lead susceptibilities of gasolines

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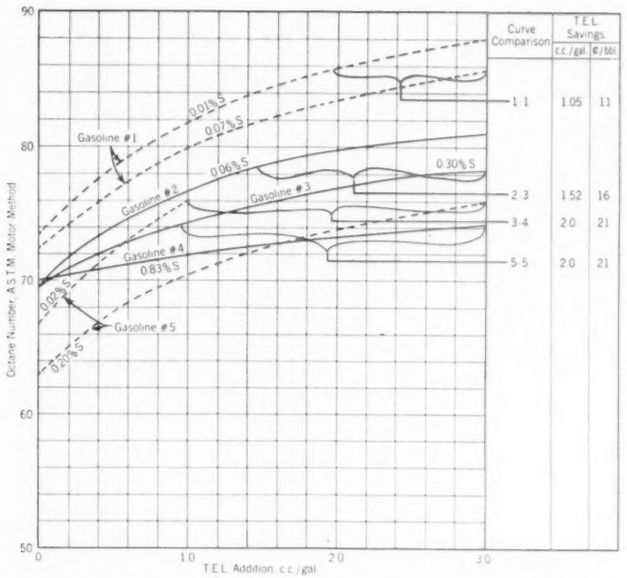

Fig. 2. Typical effect of sulfur content on lead susceptibilities of gasolines

be the result of differences in chemical structure of the hydrocarbons, dependent on such factors as the source of crude, straight run or cracked, etc. In this case nothing can be done to improve lead susceptibility except by "reforming" the molecules.

Sulfur vs. Octane Number

However, it has also been found that other factors influence lead susceptibility. These have to do with the impurities found in the gasoline. All impurities do not adversely affect lead susceptibility. For example, the presence of some alcohols (oxygen carriers) improves the lead susceptibility. But in general, the presence of all sulfur compounds depreciates the lead susceptibility. Fig. 2 illustrates some of these differences due to the presence of sulfur compounds.

Consequently, their removal has been the subject of much recent investigation, especially since the automobile industry has designed cars to employ consistently higher octane number gasoline in order to reduce fuel consumption, and improve efficiency. A factor or particular significance in this respect may be seen by referring again to Table 1. As the octane number of a gasoline is raised by the use of TEL. the improvement in octane number for successive additions of lead become smaller. Therefore, in order to keep the cost of producing high octane gasoline as low as possible it is necessary to take advantage of any scheme or processing which will improve lead susceptibility economically. It is also evident that the financial return from improvement in lead susceptibility increases as octane number requirement is raised, due to the saving in the cracking required. Therefore, reduction in sulfur content is sought.

As mentioned, hydrogen sulfide is easily and cheaply removed. Normal boiling range gasolines contain very little, and a well stabilized gasoline has practically none. On the other hand, inactive type sulfur compounds such as sulfides, poly-sulfides and thiophenes may be removed only with difficulty and usually gasolines high in these impurities are avoided or disposed of in low octane fuel blends because of the lack of really economical processes for their removal.

In the case of mercaptans, which are sulfur compounds of varying degrees of reactivity, processing is a necessary evil, whether economical or not. This requirement is due to either their detrimental sales characteristics (malodorous), or even if of the relatively inactive types (slight odor), to their instability or decomposition to the active types, on handling or subsequent processing.

In the past this processing has been limited to "sweetening" which reacted with the mercaptans to greater or lesser degrees and converted them to the disulfides; i.e., the inactive types of sulfur compounds. These treatments merely change the type of sulfur to circumvent the odor problem. No reduction in sulfur content is effected, and in the case of some treatments an increase in sulfur actually results.

In the light of the present knowledge concerning the effect of sulfur compounds on lead susceptibility, the conventional sweetening processes not only increase direct process operating costs, which in some cases are relatively high, but also show no product improvement, and in many cases product degradation. A few examples of loss in lead susceptibility due to this type of sweetening are shown in Table 2.

TABLE 2

Effect of "Sweetening" on Octane Number & Lead Susceptibility

T.E.L. Addition ml.	Octane Nos. A.S.T.M.—C.F.R. Motor Method 0 (orig.)	1	2	3
Unsweetened	53.0	63.5	69.5	73.0
Sweetened	51.0	62.5	68.2	72.1
Unsweetened	63.5	71.5	75.0	77.5
Sweetened	62.0	69.6	73.1	75.7
Unsweetened	71.4	75.2	77.4	79.1
Sweetened	70.6	74.9	77.0	78.6

Fig. 3 shows this data in graph form, and also indicates the resulting losses in cents per barrel for leading to 72 octane number.

These data do not represent the worst cases but should rather be taken only as representative. They do show sufficient margin of profit to justify economically an attempt to treat mercaptans by other methods.

Mercaptan Removal Processes

There have been several different approaches to this problem, based on either direct extraction or conversion to a more easily removable form of sulfur such as hydrogen sulfide. Extraction on bauxite has been done in some cases, while catalytic conversion over bauxite has been employed in other cases, with varying degrees of process and economic success.

Straight chemical extraction using caustic soda has also been employed and considerable work has been done to determine the factors controlling its general applicability. The chemical equation for this extraction is expressed generally as $NaOH + R\,SH = NaSR + H_2O$.

It has been found that the ability of caustic to extract

TABLE 1

Lead Susceptibilities of Various Gasolines

Stock	Octane Numbers & Octane Number Increase O.N. Orig.	O.N. +1 ml.	O.N. Incr.	O.N. +2 ml.	O.N. Incr.	O.N. +3 ml.	O.N. Incr.
"A" Octane Nos.	52.0	59.5		64.5		69.5	
O.N. Increase/ml. TEL.			7.5		5.0		5.0
"B" Octane Nos.	53.0	63.5		69.5		73.0	
O.N. Increase/ml. TEL.			10.5		6.0		3.5
"C" Octane Nos.	53.5	61.5		66.0		69.5	
O.N. Increase/ml. TEL.			8.0		4.5		3.5
"D" Octane Nos.	63.0	68.5		70.5		72.0	
O.N. Increase/ml. TEL.			5.5		2.0		1.5
"E" Octane Nos.	63.5	71.5		75.0		77.5	
O.N. Increase/ml. TEL.			8.0		3.5		2.5
"F" Octane Nos.	70.6	74.9		77.0		78.6	
O.N. Increase/ml. TEL.			4.3		2.1		1.6
"G" Octane Nos.	72.0	74.0		75.5			
O.N. Increase/ml. TEL.			2.0		1.5		
"H" Octane Nos.	72.0	76.6		79.1		80.8	
O.N Increase/ml. TEL.			4.6		2.5		1.7
"I" Octane Nos.	77.5	80.4		82.0		83.0	
O.N. Increase/ml. TEL.			2.9		1.6		1.0

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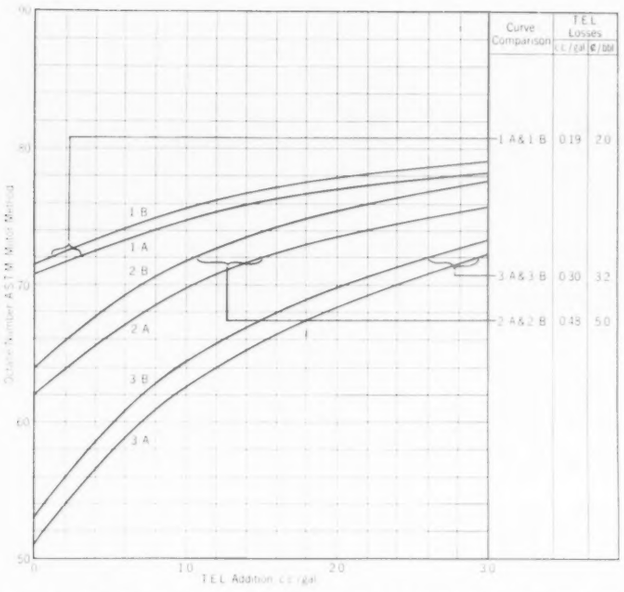

Fig. 3. Typical losses on conventional sweetening of gasolines

mercaptans decreases as their molecular weight increases, and as their molecular configuration (chemical structure) becomes more complicated (branched). Simple, low molecular weight mercaptans can be satisfactorily extracted in this manner, but in most cases the mercaptans are not limited to low molecular weight (one or two carbon atoms). In this case the caustic washed gasolines are still sour and must be sweetened, leaving the bulk of the sulfur still in the sweet gasoline. Also, doctor sweetening of partially extracted gasolines is invariably more difficult than that of the original gasolines.

Yabroff and Border[1] have made a comparison of the difficulties of extracting various mercaptans with caustic. This is reproduced in Fig. 4 which is a plot of extraction coefficients of the various mercaptans in caustic soda against the molecular weight of the mercaptans (number of carbon atoms). The higher the extraction coefficient the greater is the ease of extracting the mercaptan. It is readily seen that ethyl mercaptan (2 carbon atoms) is only about one-quarter as easily extracted as methyl mercaptan (1 carbon atom), and propyl mercaptan (3 carbon atoms) only one-fifth to one-seventh as easily as ethyl mercaptan. The higher molecular weight mercaptans are still more insoluble.

This difficulty in extraction of the higher molecular weight mercaptans with caustic soda is not so much a matter of inertness or chemical inactivity of the mercaptans as it is a decrease in the solubility of the mercaptans in the water making up the caustic solution, plus the added effect of the caustic itself in the water "salting out" the mercaptans; that is, the caustic prevents solution of the mercaptans by being there "first," so to speak.

The successful use of caustic soda solutions as extractants, then, is dependent on finding a substance which, when dissolved in the caustic, will increase the solubility of the mercaptans and overcome the "salting out" effect of the caustic. Such chemicals are known as "Solutizers."

The Solutizer Process

The Shell Development Co. has conducted extensive surveys of the field of solutizers for the mercaptan-caustic soda system. These include organic solvents such as the alcohols and glycerols and salts of organic acids. The organic solvent solutizers are effective but their solubility in the gasoline is appreciable. The organic salt solutizers are also effective and in addition have practically no solubility in the gasoline.

The process now about to be described is the result of the work of the Shell Development Co. and has been named the Solutizer process, due to the use of a solutizer to increase the solubility of the mercaptans in the caustic. The solutizer used is the potassium or sodium salt of isobutyric acid. The solution used is usually six normal caustic potash with three normal potassium iso-butyrate solutizer. The effect of this solutizer in maintaining a high extraction coefficient for the mercaptans in caustic solution is seen in Fig. 4.

Referring to the simplified flow sheet Fig. 5, note the extreme simplicity of the process. The sour gasoline coming into the plant contains mercaptans and possibly some hydrogen sulfide, other forms of sulfur and organic acids. In order not to use up the alkalinity of the extraction solution on these acidic constituents and further, not to contaminate the solution with these impurities, the gasoline is first washed with a dilute caustic soda solution. This may be done by mixing the gasoline with the wash caustic solution and passing the mixture through a baffle plate mixer or some equivalent device. The mixture is then run into a settler where the wash caustic is separated out for recycle and the washed gasoline is floated off, ready to be treated.

The gasoline now enters a vertical extraction tower below a bed of raschig rings. The gasoline rises slowly through this contact bed countercurrently to a descending stream of "solutized" caustic, and as a result of the contact, gives up its mercaptan content to the extracting solution. Upon emerging from the contact bed the gasoline disengages from the solution and leaves the extractor at the top not only as sweet gasoline but also of lower sulfur content than the charge gasoline by the amount of the mercaptans extracted. The finished gasoline is now ready for blending or subsequent processing.

The regenerated caustic solution containing the solutizer, and which is called solutizer solution, or just "solutizer," enters the extractor above the raschig ring nest and due to its specific gravity (1.3 to 1.4), flows downward through the contact bed. The intermingling of the immiscible solutizer and gasoline on the surfaces of the raschig rings provides the necessary contacts to cause the mercaptans to leave the gasoline and enter the solutizer. This extraction takes place countercurrently, so that the last contact of the gasoline is with fully regenerated solutizer, resulting in maximum extraction of the mercaptans. The finished "doctor sweet" gasoline has less than 0.0003

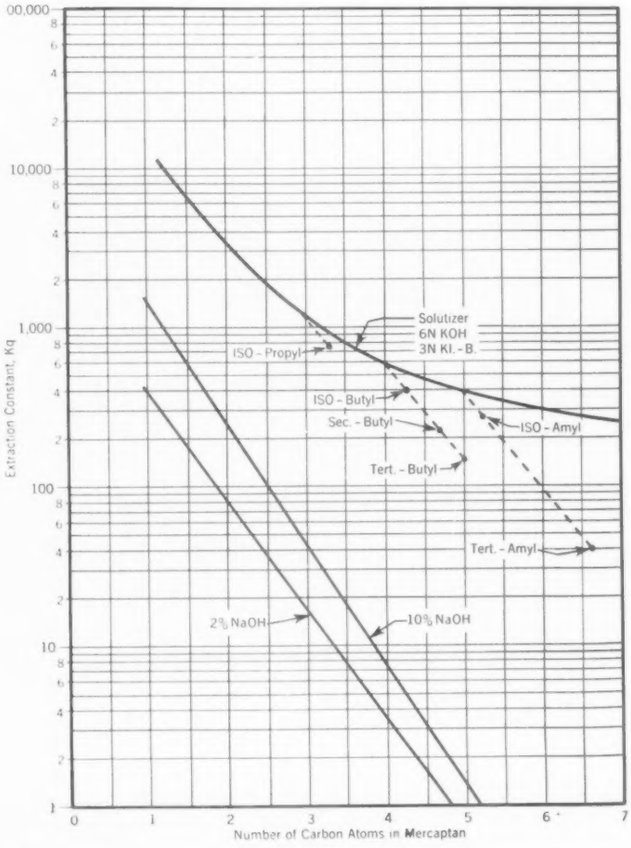

Fig. 4. Extraction of mercaptans with caustic and solutizer showing comparative difficulties of extracting various mercaptans

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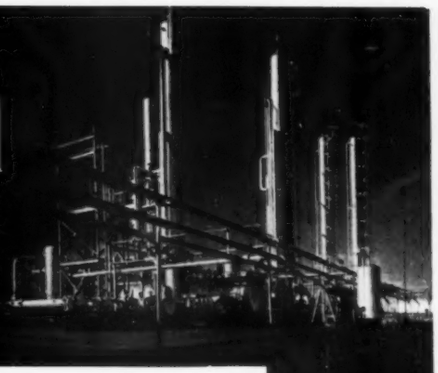

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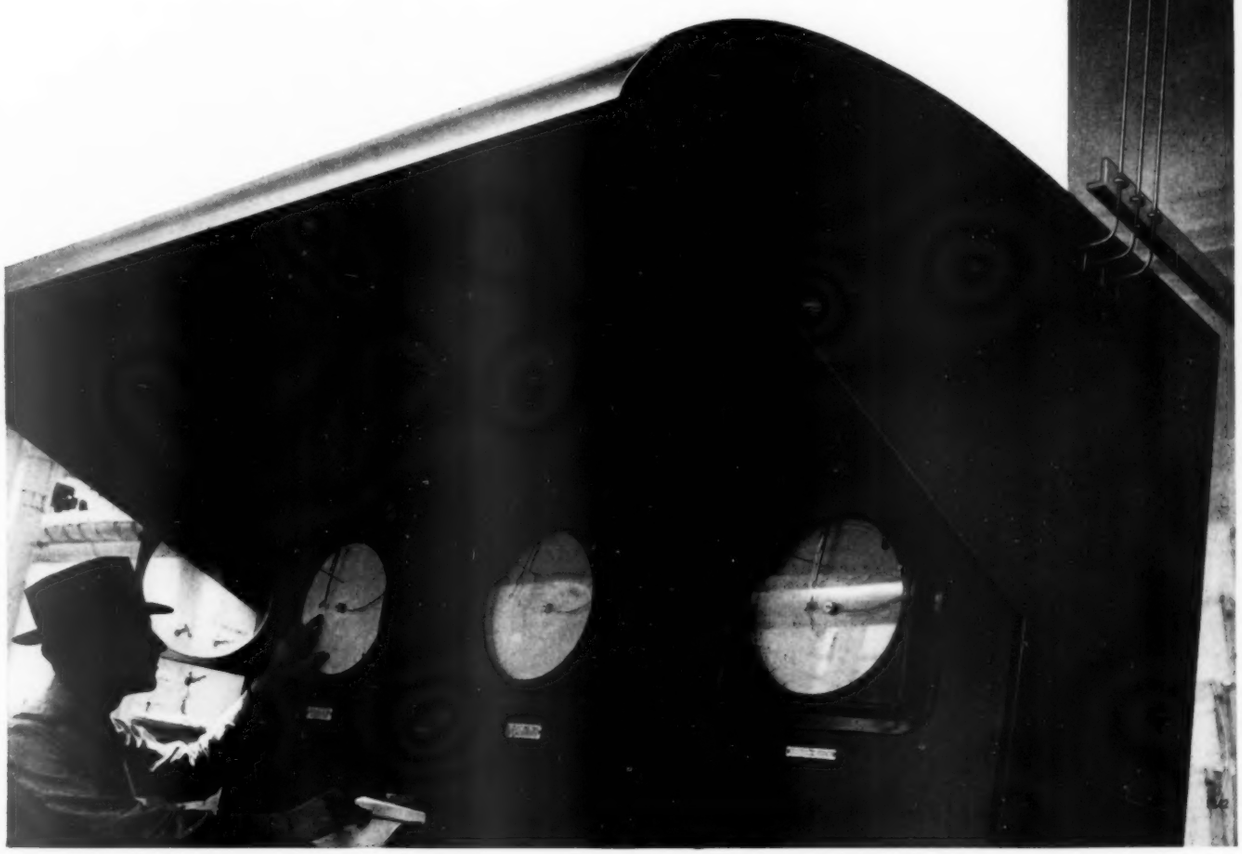
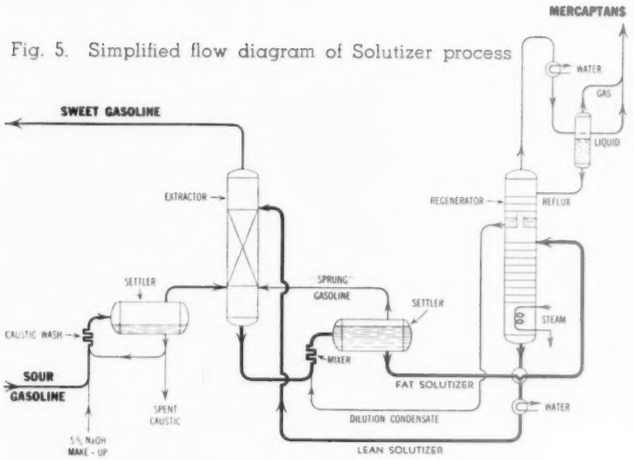


Fig. 5. Simplified flow diagram of Solutizer process



to 0.0004% mercaptan content, which is the limit of sensitivity of the "doctor" test.

The fat solutizer leaving the base of the contact bed disengages from the gasoline and collects in the bottom of the tower. The solutizer at this point contains a very small amount of dissolved gasoline. If this concentrated solutizer is diluted with water the dissolved gasoline immediately becomes insoluble and literally "springs" from the solutizer.

Consequently the solutizer leaving the base of the extractor is mixed with condensate from the regenerator in a baffle mixer and the diluted solutizer from which dissolved gasoline has "sprung" is allowed to enter a settler in which the "sprung" gasoline separates and is returned to the extractor for recovery. The separated solutizer is then ready for regeneration.

Regeneration of solutizer requires that the solution be heated to its boiling point and stripped with steam. This is accomplished by passing the fat solutizer through heat exchangers for heat conservation (preheating), and then into the top of the regeneration section of a bubble tower. In passing downward from tray to tray the solutizer is repeatedly exposed to the stripping action of steam generated in a reboiler and rising upward through the bubble trays.

The reboiler is at the base of the regenerator and is steam heated in a closed steam circuit in order not to alter the concentration of the solutizer and to concentrate the solutizer to its original strength before dilution. The stripping steam comes from evaporating off this dilution condensate which was added to "spring" the dissolved gasoline.

The regenerated solutizer, lean with respect to mercaptan content, and concentrated to its original strength, is now ready for cooling and recirculation. For heat economy it is passed through heat exchangers, preheating the fat solutizer, and then water-cooled to the desired temperature for recycling through the system. The steam and stripped mercaptans leaving the top of the regeneration section of the regenerator, pass through a chimney section in the tower and rise through bubble trays and out the top of the tower to a condenser. The steam and most of the mercaptans condense, some low boiling ones remaining in the gaseous state and flowing away to be burned.

The condensed liquids flow down to an accumulator where the mercaptans float on the water in an upper layer from which they are pumped away and burned. The water layer is pumped back to the top of the tower as reflux. Here it is heated by the steam rising from the regenerator section and collects in a well section around the chimney. This hot condensate, relatively free from mercaptans, forms the source of dilution condensate which "springs" dissolved gasoline from the fat solutizer and later becomes the stripping steam for regeneration.

By regenerating the solutizer in this manner the control of the stripping is simple and there is no change in solutizer concentration once the conditions are set. Also, there is no disposal problem of steam or condensate laden with mercaptans. The only waste products are gaseous and liquid mercaptans which may be burned or recovered as desired.

Application of Process

The Solutizer process is applicable to the removal of mercaptans from any type of gasoline, whether straight run, cracked, reformed or special polymerization product. Samples of these various types of gasoline have been tested in experimental procedures for extraction results and improvement in lead susceptibility as well as in semi-plant scale pilot operation for general operability. Results of some of these determinations[2] are given in Table 3, and Fig. 6. These show the improvement in octane number and savings in lead that may be made as a result of complete mercaptan extraction. These range from 1 to 13.6c per bbl. in lead savings when leading to only 72 octane number. For 76 octane number the lead savings increase to from 1 to 16.8c per bbl. With the present tendency to hike the octane numbers of motor gasolines these values for lead savings would be further enhanced. In addition, the Solutizer process permits utilization of more gasolines in motor fuels without additional cracking in spite of the 3 c.c. per gallon ceiling on leading of motor gasolines. This

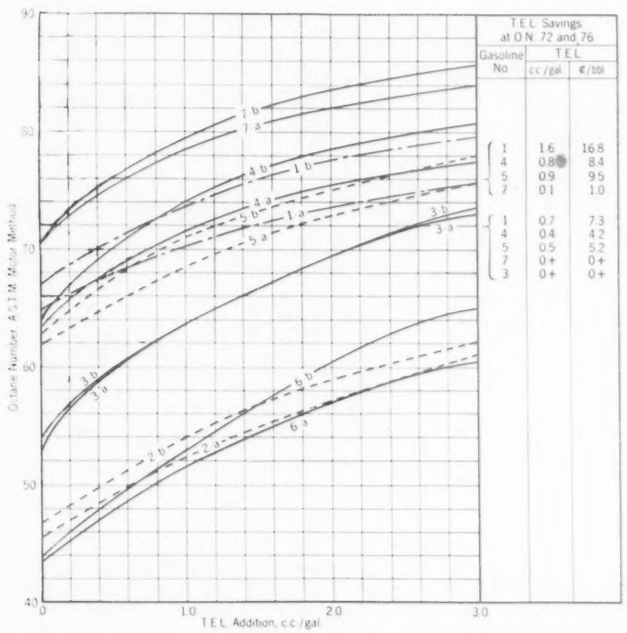


Fig. 6-A. Comparison of octane numbers and lead susceptibilities before (a) and after (b) solutizing straight-run gasolines

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TABLE 3*

Type of Gasoline	No.	Properties of Untreated (Sour Gasolines) A.S.T.M. Dist. °F. IBP	FBP	API Grav.	Sulfur, % Weight Total	Mercaptan	RSH %ES	Effect of Solutizer Sweetening on Octane Number and Lead Susceptibility O.N. of Untreated Sour Gasoline, Motor Method Clear	+1cc.	+2cc.	+3cc.	Increase in O.N. Motor Method by Solutizing Clear	+1cc.	+2cc.	+3cc.
								TEL Addition				TEL Addition			
Straight Run	1	91	293	79.3	0.466	0.172	37	65.0	70.5	73.5	75.5	2.0	3.2	4.2	3.9
	2	119	383	68.2	0.192	0.073	38	45.5	52.5	57.0	61.0	1.2	1.4	1.9	1.2
	3	104	370	64.9	0.033	0.006	18	53.0	63.5	69.5	73.0	0.6	0.	0.	0.3
	4	113	351	62.6	0.112	0.052	46	63.5	71.5	75.0	77.5	0.4	2.5	3.0	3.3
	5	119	307	64.9	0.090	0.042	47	62.0	68.5	73.0	75.5	0.7	2.4	2.1	2.4
	6	118	433	59.4	0.115	0.042	37	43.5	51.5	57.0	60.5	0.3	2.5	3.6	4.3
	7	119	261	64.5	0.064	0.020	31	70.5	78.5	82.0	84.0	0.0	1.0	1.2	1.5
Cracked	11	115	398	57.9	0.217	0.082	38	63.0	68.5	71.0	72.0	0.4	1.7	2.0	2.8
	12	98	385	59.3	0.164	0.058	35	63.0	68.5	71.5	74.0	0.5	1.4	1.9	1.4
	13	92	245	77.9	0.292	0.184	63	75.5	78.0	....	81.5	0.8	2.6	...	2.4
	14	92	378	62.5	0.282	0.111	39	70.5	75.0	76.5	78.0	0.	1.4	2.3	2.3
	15	109	389	57.9	0.128	0.037	29	65.0	71.0	73.0	75.0	0.5	0.9	1.0	1.3
	16	112	402	59.3	0.067	0.019	28	66.0	72.0	75.5	77.5	0.4	1.2	1.6	1.5
	17	98	435	55.9	0.303	0.090	30	70.0	72.5	75.5	76.5	0.5	1.0	1.3	2.5
	18	107	406	57.4	0.084	0.021	25	59.5	66.5	70.0	73.0	0.	1.0	2.0	1.5
	19	95	398	60.1	0.305	0.117	38	67.5	71.5	....	75.5	0.8	2.0	...	2.7
	20	99	410	59.8	0.135	0.022	16	70.0	75.0	77.0	79.0	0.	1.3	1.2	1.1
Blend of Cracked and Straight Run	8	105	377	60.9	0.090	0.022	24	67.0	73.5	77.0	79.0	0.9	1.0	1.1	0.6
	9	103	385	59.6	0.186	0.056	30	67.0	73.0	75.5	77.5	0.	1.4	1.9	2.0
	10	111	388	60.7	0.093	0.016	17	58.0	65.5	70.0	72.5	0.2	0.7	0.9	0.7
Catalytic Polymer	21	79	414	75.8	0.47	0.193	41	70.0	75.0	77.0	78.5	0.4	1.4	1.7	2.0
	22	84	414	71.1	0.138	0.045	33	82.5	84.0	85.0	85.5	0.3	0.3	0.3	0.7
Reformed	23	116	396	52.7	0.130	0.059	45	69.0	75.0	78.0	79.0	0.4	0.9	1.1	1.6

*TABLE 3 included through the courtesy of the Shell Development Co.

is due directly to the improvement in lead susceptibility obtained by mercaptan extraction.

Plants and Economics

The Solutizer process is now in full scale commercial operation in three Shell Oil Co. refineries, with plans for installations of additional units in its other refineries. The existing units and their operating throughputs are as follows:

Wood River, Ill. ..... 15,000 B/D.
Dominguez, Cal. ..... 12,000 B/D.
Martinez, Cal. ..... 8,000 B/D.

A still larger unit is now under construction for the refinery at:
Houston, Texas ..... 28,000 B/D.

The Wood River plant is operating on a charge stock primarily composed of straight run naphthas, with the inclusion of some cracked products. The California units are operating on cracked gasolines. The Wood River and Dominguez plants are located in very crowded, cramped quarters, indicating the compactness of the units and the small plot area required.

Border,[3] in a recent publication has indicated the sulfur reduction and improvement in lead response obtained in plant operation. His data showed that a gasoline of 0.12% total sulfur finished 0.03% total sulphur as a result of mercaptan extraction by solutizing. This reduction in sulfur content showed lead savings of 0.27 and 0.90 c.c. per gallon respectively, for 75 and 80 octane numbers.

Direct operating cost for a plant 12,000 to 15,000 barrels per day capacity, including steam, water, electricity for power and lights, labor and supervision, is estimated at 1¼ to 1½c per bbl. of charge. Equivalent cost for "doctor sweetening" the same products is estimated at 1c per bbl.

No measurable charge stock handling losses are found in solutizing the gasoline due to the closed system of operations, with less than 0.25% product regradation to fuel oil resulting from the removal of mercaptans and entrained gasolines. Contrasted with this are 0.5-0.75% product loss by "doctor sweetening" in handling and regenerating (air blowing solution).

Operating data for the plants now solutizing gasolines show good returns and short payout. Plant performance also shows the production of a sweet gasoline with a decrease in sulfur content, so that a gasoline which would not meet 0.10% maximum sulfur content was definitely "low sulfur" after solutizing.

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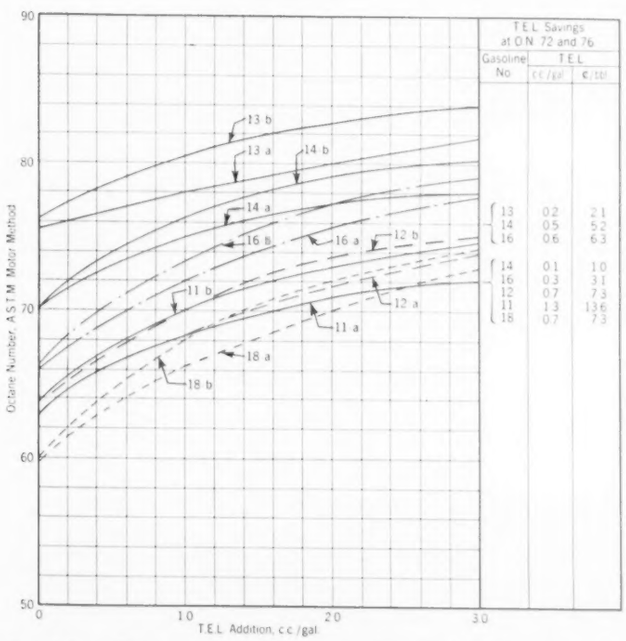

Fig. 6-B. Comparison of octane number and lead susceptibility before (a) and after (b) solutizing cracked gasolines

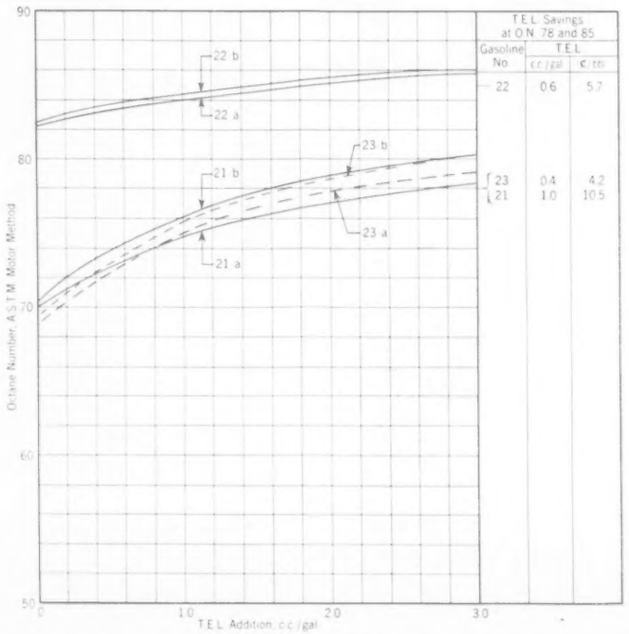

Fig. 6-C. Comparison of octane number and lead susceptibility before (a) and after (b) solutizing polymer and reformed gasolines